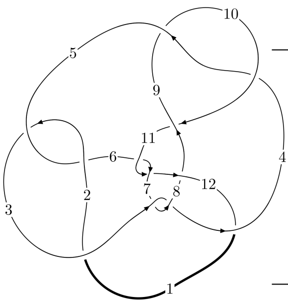
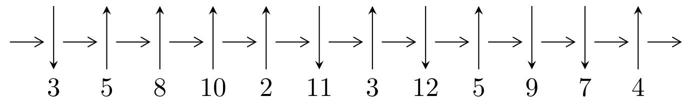
$12n_{0435}$ ($K12n_{0435}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -1.59109 \times 10^{70} u^{47} + 3.54965 \times 10^{69} u^{46} + \cdots + 6.67625 \times 10^{70} b - 1.64708 \times 10^{71},$$
$$1.45455 \times 10^{70} u^{47} + 1.03237 \times 10^{71} u^{46} + \cdots + 1.93611 \times 10^{72} a - 2.56576 \times 10^{72},\ u^{48} + 18u^{46} + \cdots + 13u +$$
$$I_2^u = \langle -2u^{18} + 2u^{17} + \cdots + b - 6,\ -3u^{19} + 4u^{18} + \cdots + a + 6,\ u^{20} - u^{19} + \cdots - u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 68 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. $\boldsymbol{I^u_1 = \langle -1.59 \times 10^{70} u^{47} + 3.55 \times 10^{69} u^{46} + \cdots + 6.68 \times 10^{70} b - 1.65 \times 10^{71},\ 1.45 \times 10^{70} u^{47} + 1.03 \times 10^{71} u^{46} + \cdots + 1.94 \times 10^{72} a - 2.57 \times 10^{72},\ u^{48} + 18u^{46} + \cdots + 13u + 1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00751276u^{47} - 0.0533219u^{46} + \cdots - 12.6223u + 1.32521 \\ 0.238322u^{47} - 0.0531683u^{46} + \cdots + 12.7021u + 2.46708 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.553394u^{47} - 0.134182u^{46} + \cdots + 21.9136u + 6.68234 \\ 0.355711u^{47} - 0.0573944u^{46} + \cdots + 21.1330u + 2.83673 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.171681u^{47} - 0.0635417u^{46} + \cdots - 0.410390u + 3.71143 \\ 0.377230u^{47} - 0.0534903u^{46} + \cdots + 21.6696u + 2.90737 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -1.01739u^{47} - 0.00588462u^{46} + \cdots - 41.8000u - 8.31915 \\ -0.575290u^{47} + 0.0697542u^{46} + \cdots - 22.4788u - 3.42421 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.22875u^{47} + 0.234716u^{46} + \cdots - 73.9234u - 8.65813 \\ -0.0478120u^{47} + 0.0300471u^{46} + \cdots - 4.36142u + 1.13699 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.20137u^{47} + 0.213398u^{46} + \cdots - 74.0842u - 8.67754 \\ 0.0502293u^{47} + 0.000898209u^{46} + \cdots - 2.60784u + 1.37666 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.442100u^{47} - 0.0756388u^{46} + \cdots - 19.3212u - 4.89494 \\ -0.575290u^{47} + 0.0697542u^{46} + \cdots - 22.4788u - 3.42421 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.724487u^{47} + 0.0435195u^{46} + \cdots - 74.1390u - 1.70909$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{48} + 67u^{47} + \cdots + 604670586u + 32137561$
c_2, c_5	$u^{48} + 3u^{47} + \cdots + 13144u + 5669$
c_3, c_7	$u^{48} + u^{47} + \cdots + 12u + 1$
c_4, c_9	$u^{48} + 18u^{46} + \cdots + 13u + 1$
c_6, c_{11}	$u^{48} + u^{47} + \cdots - 2534u + 1167$
c_8	$u^{48} - 3u^{47} + \cdots + 3u + 1$
c_{10}	$u^{48} + 36u^{47} + \cdots - 39u + 1$
c_{12}	$u^{48} + 11u^{47} + \cdots + 7155479u + 5008881$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{48} - 157y^{47} + \cdots + 26058532373273318y + 1032822827028721$
c_2, c_5	$y^{48} + 67y^{47} + \cdots + 604670586y + 32137561$
c_3, c_7	$y^{48} - 9y^{47} + \cdots - 22y + 1$
c_4, c_9	$y^{48} + 36y^{47} + \cdots - 39y + 1$
c_6, c_{11}	$y^{48} - 53y^{47} + \cdots + 12171488y + 1361889$
c_8	$y^{48} - 3y^{47} + \cdots + 33y + 1$
c_{10}	$y^{48} - 36y^{47} + \cdots - 575y + 1$
c_{12}	$y^{48} + 45y^{47} + \cdots + 12614337897293y + 25088888872161$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.624375+0.790739I$ $a=\ \ 0.652451+0.017302I$ $b=-0.987977-0.377013I$	$3.11335+0.59534I$	$8.72046-1.05598I$
$u=-0.624375-0.790739I$ $a=\ \ 0.652451-0.017302I$ $b=-0.987977+0.377013I$	$3.11335-0.59534I$	$8.72046+1.05598I$
$u=-0.441932+0.974715I$ $a=-1.49605-0.17508I$ $b=\ \ 0.527184-0.376923I$	$-3.50502-4.85959I$	$-3.75126+8.82096I$
$u=-0.441932-0.974715I$ $a=-1.49605+0.17508I$ $b=\ \ 0.527184+0.376923I$	$-3.50502+4.85959I$	$-3.75126-8.82096I$
$u=-0.673784+0.878510I$ $a=-1.13342-1.57768I$ $b=\ \ 1.000680-0.446035I$	$2.90064-5.69851I$	$8.81108+5.67017I$
$u=-0.673784-0.878510I$ $a=-1.13342+1.57768I$ $b=\ \ 1.000680+0.446035I$	$2.90064+5.69851I$	$8.81108-5.67017I$
$u=-0.032468+0.886041I$ $a=\ \ 0.75785+1.61125I$ $b=\ \ 0.435941+0.357265I$	$-1.78883+1.42161I$	$-2.69512-4.63338I$
$u=-0.032468-0.886041I$ $a=\ \ 0.75785-1.61125I$ $b=\ \ 0.435941-0.357265I$	$-1.78883-1.42161I$	$-2.69512+4.63338I$
$u=\ \ 0.846760+0.741793I$ $a=\ \ 0.152370-0.285782I$ $b=\ \ 0.381842+0.020417I$	$0.97742+3.01246I$	$6.86160-7.48318I$
$u=\ \ 0.846760-0.741793I$ $a=\ \ 0.152370+0.285782I$ $b=\ \ 0.381842-0.020417I$	$0.97742-3.01246I$	$6.86160+7.48318I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.655494 + 0.992944I$ $a = 0.422584 - 0.642594I$ $b = -0.135634 - 0.580747I$	$0.46539 + 2.67049I$	$2.00000 - 1.39704I$
$u = 0.655494 - 0.992944I$ $a = 0.422584 + 0.642594I$ $b = -0.135634 + 0.580747I$	$0.46539 - 2.67049I$	$2.00000 + 1.39704I$
$u = 0.514823 + 1.094190I$ $a = -0.087680 + 0.763881I$ $b = 0.882038 + 0.252747I$	$-1.61783 + 4.43732I$	$2.00000 - 5.85728I$
$u = 0.514823 - 1.094190I$ $a = -0.087680 - 0.763881I$ $b = 0.882038 - 0.252747I$	$-1.61783 - 4.43732I$	$2.00000 + 5.85728I$
$u = 1.227510 + 0.143214I$ $a = 0.507883 + 0.381592I$ $b = -0.99480 + 1.00630I$	$-10.62720 + 0.57436I$	0
$u = 1.227510 - 0.143214I$ $a = 0.507883 - 0.381592I$ $b = -0.99480 - 1.00630I$	$-10.62720 - 0.57436I$	0
$u = 0.058897 + 1.244960I$ $a = 0.47320 - 1.49785I$ $b = -1.064760 - 0.441088I$	$-4.30551 - 1.03154I$	0
$u = 0.058897 - 1.244960I$ $a = 0.47320 + 1.49785I$ $b = -1.064760 + 0.441088I$	$-4.30551 + 1.03154I$	0
$u = -1.257530 + 0.042178I$ $a = 0.451983 - 0.394677I$ $b = -1.01210 - 0.99277I$	$-10.56360 + 7.91020I$	$0. - 4.35250I$
$u = -1.257530 - 0.042178I$ $a = 0.451983 + 0.394677I$ $b = -1.01210 + 0.99277I$	$-10.56360 - 7.91020I$	$0. + 4.35250I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.081966+1.278240I$ $a=-0.165976+1.161460I$ $b=-1.39247+0.57052I$	$-3.15567-4.84062I$	0
$u=-0.081966-1.278240I$ $a=-0.165976-1.161460I$ $b=-1.39247-0.57052I$	$-3.15567+4.84062I$	0
$u=-0.135469+1.297940I$ $a=-0.45559+1.67340I$ $b=-1.05029+1.24464I$	$-8.08347-4.38691I$	0
$u=-0.135469-1.297940I$ $a=-0.45559-1.67340I$ $b=-1.05029-1.24464I$	$-8.08347+4.38691I$	0
$u=-0.037303+0.688643I$ $a=1.18323+2.50638I$ $b=0.513502+0.031469I$	$-1.84510+1.37647I$	$-3.10892-4.85405I$
$u=-0.037303-0.688643I$ $a=1.18323-2.50638I$ $b=0.513502-0.031469I$	$-1.84510-1.37647I$	$-3.10892+4.85405I$
$u=-0.238967+1.325580I$ $a=-0.10468+1.41597I$ $b=-0.389767+1.147250I$	$-6.65584-1.72851I$	0
$u=-0.238967-1.325580I$ $a=-0.10468-1.41597I$ $b=-0.389767-1.147250I$	$-6.65584+1.72851I$	0
$u=0.076869+1.361260I$ $a=-0.56627-1.73054I$ $b=-0.936074-0.890702I$	$-8.79264+3.29679I$	0
$u=0.076869-1.361260I$ $a=-0.56627+1.73054I$ $b=-0.936074+0.890702I$	$-8.79264-3.29679I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.589410 + 0.100511I$ $a = 0.567538 - 0.049914I$ $b = -0.746651 - 0.034665I$	$1.122130 + 0.019409I$	$9.50095 - 0.01156I$
$u = 0.589410 - 0.100511I$ $a = 0.567538 + 0.049914I$ $b = -0.746651 + 0.034665I$	$1.122130 - 0.019409I$	$9.50095 + 0.01156I$
$u = -0.501349 + 0.282660I$ $a = 1.161770 + 0.357456I$ $b = 0.124161 - 0.520948I$	$-1.93771 + 1.02545I$	$-1.89001 - 1.40862I$
$u = -0.501349 - 0.282660I$ $a = 1.161770 - 0.357456I$ $b = 0.124161 + 0.520948I$	$-1.93771 - 1.02545I$	$-1.89001 + 1.40862I$
$u = 0.21012 + 1.44602I$ $a = -0.495221 - 1.182570I$ $b = -0.621138 - 0.800411I$	$-6.03656 + 5.90639I$	0
$u = 0.21012 - 1.44602I$ $a = -0.495221 + 1.182570I$ $b = -0.621138 + 0.800411I$	$-6.03656 - 5.90639I$	0
$u = 0.67234 + 1.40412I$ $a = -0.52296 + 1.53340I$ $b = 1.14683 + 0.92820I$	$-14.5255 + 6.1758I$	0
$u = 0.67234 - 1.40412I$ $a = -0.52296 - 1.53340I$ $b = 1.14683 - 0.92820I$	$-14.5255 - 6.1758I$	0
$u = -0.61912 + 1.43345I$ $a = -0.37937 - 1.57791I$ $b = 1.16220 - 0.96300I$	$-14.9365 - 14.5337I$	0
$u = -0.61912 - 1.43345I$ $a = -0.37937 + 1.57791I$ $b = 1.16220 + 0.96300I$	$-14.9365 + 14.5337I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.50632 + 1.50428I$ $a = 0.688530 - 0.755252I$ $b = 0.88540 - 1.18990I$	$-15.9240 + 6.7617I$	0
$u = 0.50632 - 1.50428I$ $a = 0.688530 + 0.755252I$ $b = 0.88540 + 1.18990I$	$-15.9240 - 6.7617I$	0
$u = -0.57393 + 1.51903I$ $a = 0.650441 + 0.646597I$ $b = 0.860711 + 1.121730I$	$-15.5031 + 1.2996I$	0
$u = -0.57393 - 1.51903I$ $a = 0.650441 - 0.646597I$ $b = 0.860711 - 1.121730I$	$-15.5031 - 1.2996I$	0
$u = -0.003644 + 0.307346I$ $a = 3.59056 - 1.52243I$ $b = 1.030320 + 0.343288I$	$0.26991 + 4.16666I$	$3.28056 - 8.29206I$
$u = -0.003644 - 0.307346I$ $a = 3.59056 + 1.52243I$ $b = 1.030320 - 0.343288I$	$0.26991 - 4.16666I$	$3.28056 + 8.29206I$
$u = -0.136716 + 0.053529I$ $a = 2.64684 - 0.41040I$ $b = 0.880852 + 0.819546I$	$-4.05966 + 3.04369I$	$7.93184 - 4.57606I$
$u = -0.136716 - 0.053529I$ $a = 2.64684 + 0.41040I$ $b = 0.880852 - 0.819546I$	$-4.05966 - 3.04369I$	$7.93184 + 4.57606I$

II.

$$\boldsymbol{I_2^u = \langle -2u^{18}+2u^{17}+\cdots+b-6,\ -3u^{19}+4u^{18}+\cdots+a+6,\ u^{20}-u^{19}+\cdots-u+1\rangle}$$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}3u^{19}-4u^{18}+\cdots-30u^2-6\\2u^{18}-2u^{17}+\cdots-6u+6\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-4u^{19}+4u^{18}+\cdots+2u^2-u\\-4u^{19}+4u^{18}+\cdots-11u+1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-3u^{19}+3u^{18}+\cdots+6u-1\\-4u^{19}+4u^{18}+\cdots-10u+1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-3u^{19}+3u^{18}+\cdots+u^2+3u\\u^{19}-2u^{18}+\cdots+7u-5\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u^{19}+u^{18}+\cdots-2u-5\\u^{19}+2u^{18}+\cdots+34u^2+7\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u^3\\u^5+u^3+u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u^{19}+2u^{18}+\cdots-3u-4\\u^{19}+2u^{18}+\cdots+31u^2+6\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-4u^{19}+5u^{18}+\cdots-4u+5\\u^{19}-2u^{18}+\cdots+7u-5\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 5u^{19}-19u^{18}+41u^{17}-102u^{16}+143u^{15}-297u^{14}+330u^{13}-608u^{12}+541u^{11}-904u^{10}+653u^{9}-1017u^{8}+581u^{7}-856u^{6}+364u^{5}-527u^{4}+139u^{3}-204u^{2}+27u-40$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 18u^{19} + \cdots - 12u + 1$
c_2	$u^{20} + 9u^{18} + \cdots + 6u^2 + 1$
c_3	$u^{20} - 5u^{18} + \cdots - 6u^2 + 1$
c_4	$u^{20} - u^{19} + \cdots - u + 1$
c_5	$u^{20} + 9u^{18} + \cdots + 6u^2 + 1$
c_6	$u^{20} - 5u^{18} + \cdots - 2u + 1$
c_7	$u^{20} - 5u^{18} + \cdots - 6u^2 + 1$
c_8	$u^{20} - 4u^{19} + \cdots + 3u + 1$
c_9	$u^{20} + u^{19} + \cdots + u + 1$
c_{10}	$u^{20} + 11u^{19} + \cdots + 15u + 1$
c_{11}	$u^{20} - 5u^{18} + \cdots + 2u + 1$
c_{12}	$u^{20} - 2u^{18} + \cdots + 243u + 67$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 18y^{19} + \cdots + 8y + 1$
c_2, c_5	$y^{20} + 18y^{19} + \cdots + 12y + 1$
c_3, c_7	$y^{20} - 10y^{19} + \cdots - 12y + 1$
c_4, c_9	$y^{20} + 11y^{19} + \cdots + 15y + 1$
c_6, c_{11}	$y^{20} - 10y^{19} + \cdots - 6y + 1$
c_8	$y^{20} + 4y^{19} + \cdots - 17y + 1$
c_{10}	$y^{20} + 7y^{19} + \cdots - 13y + 1$
c_{12}	$y^{20} - 4y^{19} + \cdots - 11345y + 4489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.331553 + 1.017880I$ $a = -0.263137 - 0.594468I$ $b = \ \ 1.161910 - 0.350994I$	$-1.07687 - 5.96268I$	$2.09077 + 8.83123I$
$u = -0.331553 - 1.017880I$ $a = -0.263137 + 0.594468I$ $b = \ \ 1.161910 + 0.350994I$	$-1.07687 + 5.96268I$	$2.09077 - 8.83123I$
$u = -0.709835 + 0.819251I$ $a = \ \ 1.48006 + 1.76057I$ $b = -1.044880 + 0.458438I$	$2.17630 - 6.02563I$	$-0.56028 + 9.12343I$
$u = -0.709835 - 0.819251I$ $a = \ \ 1.48006 - 1.76057I$ $b = -1.044880 - 0.458438I$	$2.17630 + 6.02563I$	$-0.56028 - 9.12343I$
$u = \ \ 0.796602 + 0.775891I$ $a = -0.547851 - 0.034126I$ $b = -0.616511 + 0.410301I$	$0.67603 + 2.30760I$	$0.839526 + 0.812523I$
$u = \ \ 0.796602 - 0.775891I$ $a = -0.547851 + 0.034126I$ $b = -0.616511 - 0.410301I$	$0.67603 - 2.30760I$	$0.839526 - 0.812523I$
$u = \ \ 0.419524 + 1.077190I$ $a = -0.842248 + 0.809097I$ $b = \ \ 0.707292 - 0.140260I$	$-3.12109 + 3.82990I$	$-1.85547 - 2.52429I$
$u = \ \ 0.419524 - 1.077190I$ $a = -0.842248 - 0.809097I$ $b = \ \ 0.707292 + 0.140260I$	$-3.12109 - 3.82990I$	$-1.85547 + 2.52429I$
$u = -0.291962 + 0.766600I$ $a = -1.56953 + 0.25172I$ $b = -1.075650 - 0.352178I$	$-0.11610 + 3.27114I$	$-0.199143 - 1.320670I$
$u = -0.291962 - 0.766600I$ $a = -1.56953 - 0.25172I$ $b = -1.075650 + 0.352178I$	$-0.11610 - 3.27114I$	$-0.199143 + 1.320670I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.713645+0.939894I$ $a=-0.698514-0.004869I$ $b=\ \ 1.066520+0.507122I$	$1.80246+0.56778I$	$0.483242-0.636305I$
$u=-0.713645-0.939894I$ $a=-0.698514+0.004869I$ $b=\ \ 1.066520-0.507122I$	$1.80246-0.56778I$	$0.483242+0.636305I$
$u=\ \ 0.825016+0.948148I$ $a=-0.304719+0.539253I$ $b=\ \ 0.574355+0.561311I$	$0.15761+3.77342I$	$1.85491-8.11212I$
$u=\ \ 0.825016-0.948148I$ $a=-0.304719-0.539253I$ $b=\ \ 0.574355-0.561311I$	$0.15761-3.77342I$	$1.85491+8.11212I$
$u=\ \ 0.308877+0.668487I$ $a=\ \ 2.53526-2.52532I$ $b=-0.730517-0.250987I$	$-1.51336-0.66802I$	$2.43579-3.63747I$
$u=\ \ 0.308877-0.668487I$ $a=\ \ 2.53526+2.52532I$ $b=-0.730517+0.250987I$	$-1.51336+0.66802I$	$2.43579+3.63747I$
$u=\ \ 0.126858+1.307690I$ $a=-0.50102-1.66176I$ $b=-0.904806-1.078820I$	$-7.62458+3.83881I$	$-1.21681-1.31905I$
$u=\ \ 0.126858-1.307690I$ $a=-0.50102+1.66176I$ $b=-0.904806+1.078820I$	$-7.62458-3.83881I$	$-1.21681+1.31905I$
$u=\ \ 0.070116+0.565143I$ $a=-0.788301-0.715423I$ $b=\ \ 0.862292-0.773239I$	$-4.51987-2.92216I$	$-8.87254+0.70432I$
$u=\ \ 0.070116-0.565143I$ $a=-0.788301+0.715423I$ $b=\ \ 0.862292+0.773239I$	$-4.51987+2.92216I$	$-8.87254-0.70432I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20} - 18u^{19} + \cdots - 12u + 1)$ $\cdot (u^{48} + 67u^{47} + \cdots + 604670586u + 32137561)$
c_2	$(u^{20} + 9u^{18} + \cdots + 6u^2 + 1)(u^{48} + 3u^{47} + \cdots + 13144u + 5669)$
c_3	$(u^{20} - 5u^{18} + \cdots - 6u^2 + 1)(u^{48} + u^{47} + \cdots + 12u + 1)$
c_4	$(u^{20} - u^{19} + \cdots - u + 1)(u^{48} + 18u^{46} + \cdots + 13u + 1)$
c_5	$(u^{20} + 9u^{18} + \cdots + 6u^2 + 1)(u^{48} + 3u^{47} + \cdots + 13144u + 5669)$
c_6	$(u^{20} - 5u^{18} + \cdots - 2u + 1)(u^{48} + u^{47} + \cdots - 2534u + 1167)$
c_7	$(u^{20} - 5u^{18} + \cdots - 6u^2 + 1)(u^{48} + u^{47} + \cdots + 12u + 1)$
c_8	$(u^{20} - 4u^{19} + \cdots + 3u + 1)(u^{48} - 3u^{47} + \cdots + 3u + 1)$
c_9	$(u^{20} + u^{19} + \cdots + u + 1)(u^{48} + 18u^{46} + \cdots + 13u + 1)$
c_{10}	$(u^{20} + 11u^{19} + \cdots + 15u + 1)(u^{48} + 36u^{47} + \cdots - 39u + 1)$
c_{11}	$(u^{20} - 5u^{18} + \cdots + 2u + 1)(u^{48} + u^{47} + \cdots - 2534u + 1167)$
c_{12}	$(u^{20} - 2u^{18} + \cdots + 243u + 67)$ $\cdot (u^{48} + 11u^{47} + \cdots + 7155479u + 5008881)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20} - 18y^{19} + \cdots + 8y + 1)$ $\cdot (y^{48} - 157y^{47} + \cdots + 26058532373273318y + 1032822827028721)$
c_2, c_5	$(y^{20} + 18y^{19} + \cdots + 12y + 1)$ $\cdot (y^{48} + 67y^{47} + \cdots + 604670586y + 32137561)$
c_3, c_7	$(y^{20} - 10y^{19} + \cdots - 12y + 1)(y^{48} - 9y^{47} + \cdots - 22y + 1)$
c_4, c_9	$(y^{20} + 11y^{19} + \cdots + 15y + 1)(y^{48} + 36y^{47} + \cdots - 39y + 1)$
c_6, c_{11}	$(y^{20} - 10y^{19} + \cdots - 6y + 1)$ $\cdot (y^{48} - 53y^{47} + \cdots + 12171488y + 1361889)$
c_8	$(y^{20} + 4y^{19} + \cdots - 17y + 1)(y^{48} - 3y^{47} + \cdots + 33y + 1)$
c_{10}	$(y^{20} + 7y^{19} + \cdots - 13y + 1)(y^{48} - 36y^{47} + \cdots - 575y + 1)$
c_{12}	$(y^{20} - 4y^{19} + \cdots - 11345y + 4489)$ $\cdot (y^{48} + 45y^{47} + \cdots + 12614337897293y + 25088888872161)$