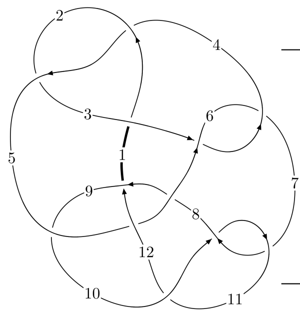
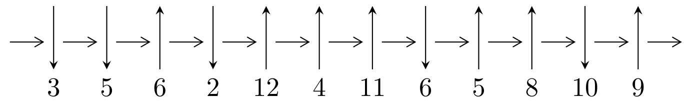
$12n_{0124}$ ($K12n_{0124}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle &-2.08067\times 10^{71}u^{23} + 5.26175\times 10^{71}u^{22} + \cdots + 2.02018\times 10^{76}b - 3.78380\times 10^{76},\\
&9.08915\times 10^{75}u^{23} + 2.34052\times 10^{76}u^{22} + \cdots + 3.92744\times 10^{80}a - 1.11660\times 10^{81},\\
&u^{24} - u^{23} + \cdots + 74162u - 19441\rangle\\
I_2^u = \langle &-967u^{11} - 301u^{10} + \cdots + 263b - 1376,\ -1506u^{11} - 552u^{10} + \cdots + 263a - 2561,\\
&u^{12} + u^{11} - u^{10} - 6u^9 - 5u^8 + u^7 + 5u^6 + 9u^5 + 11u^4 + 7u^3 + 4u^2 + 3u + 1\rangle\\
I_3^u = \langle &u^7 - 3u^5 - u^4 + 4u^3 + 2u^2 + b - u - 2,\ -u^8 - u^7 + 2u^6 + 3u^5 - u^4 - 3u^3 - 2u^2 + a + 1,\\
&u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 45 representations.

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[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. $I_1^u = \langle -2.08\times 10^{71}u^{23} + 5.26\times 10^{71}u^{22} + \cdots + 2.02\times 10^{76}b - 3.78\times 10^{76},\ 9.09\times 10^{75}u^{23} + 2.34\times 10^{76}u^{22} + \cdots + 3.93\times 10^{80}a - 1.12\times 10^{81},\ u^{24} - u^{23} + \cdots + 74162u - 19441\rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.0000231427u^{23} - 0.0000595940u^{22} + \cdots - 5.73288u + 2.84308\\ 0.0000102994u^{23} - 0.0000260459u^{22} + \cdots - 3.68024u + 1.87300\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.0000231427u^{23} - 0.0000595940u^{22} + \cdots - 5.73288u + 2.84308\\ 0.0000614617u^{23} - 0.0000856774u^{22} + \cdots - 9.36624u + 3.48148\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-0.000169431u^{23} + 0.0000106683u^{22} + \cdots + 8.83572u - 1.35661\\ 0.0000252125u^{23} - 0.0000460045u^{22} + \cdots - 4.17125u + 1.93008\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.0000635308u^{23} - 0.0000949036u^{22} + \cdots - 11.6803u + 4.35857\\ 0.0000714189u^{23} - 0.0000219756u^{22} + \cdots - 6.67895u + 2.17463\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.000194644u^{23} + 0.0000566729u^{22} + \cdots + 13.0070u - 3.28669\\ 0.0000252125u^{23} - 0.0000460045u^{22} + \cdots - 4.17125u + 1.93008\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.0000728869u^{23} + 0.0000468189u^{22} + \cdots - 0.0880205u + 0.0552699\\ -0.000132323u^{23} + 0.0000178400u^{22} + \cdots + 9.20508u - 2.72140\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0.000289264u^{23} - 0.0000276884u^{22} + \cdots - 16.0214u + 4.12000\\ -0.000164735u^{23} + 0.0000153960u^{22} + \cdots + 10.2669u - 3.73292\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.000179309u^{23} + 0.0000323990u^{22} + \cdots + 9.44236u - 2.06987\\ 0.0000244553u^{23} - 0.0000672943u^{22} + \cdots - 5.21820u + 1.94011\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.000262366u^{23} + 0.0000264100u^{22} + \cdots + 15.2839u - 4.03891\\ 0.000137186u^{23} - 0.0000456660u^{22} + \cdots - 10.1214u + 3.83499\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0000679815u^{23} - 0.000171030u^{22} + \cdots - 11.2729u + 1.52274$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{24}+24u^{23}+\cdots-179u+1$
c_2, c_4	$u^{24}-12u^{23}+\cdots+17u-1$
c_3, c_6	$u^{24}+u^{23}+\cdots-2560u+512$
c_5	$u^{24}+4u^{23}+\cdots-3u-1$
c_7, c_{10}	$u^{24}+8u^{23}+\cdots+7u+1$
c_8	$u^{24}-5u^{23}+\cdots-389242u+249139$
c_9	$u^{24}+u^{23}+\cdots-74162u-19441$
c_{11}	$u^{24}+20u^{22}+\cdots+19u+1$
c_{12}	$u^{24}+2u^{23}+\cdots+28672u+4096$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{24} + 204y^{23} + \cdots - 2901y + 1$
c_2, c_4	$y^{24} - 24y^{23} + \cdots + 179y + 1$
c_3, c_6	$y^{24} - 63y^{23} + \cdots - 3932160y + 262144$
c_5	$y^{24} + 26y^{22} + \cdots - y + 1$
c_7, c_{10}	$y^{24} + 20y^{22} + \cdots + 19y + 1$
c_8	$y^{24} + 111y^{23} + \cdots - 469614992544y + 62070241321$
c_9	$y^{24} - 61y^{23} + \cdots - 296113128y + 377952481$
c_{11}	$y^{24} + 40y^{23} + \cdots + 2151y + 1$
c_{12}	$y^{24} - 90y^{23} + \cdots + 67108864y + 16777216$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.001080 + 0.138094I$ $a = -1.318540 - 0.227339I$ $b = 0.349925 + 0.133105I$	$1.03909 - 7.66938I$	$3.58752 + 6.84907I$
$u = 1.001080 - 0.138094I$ $a = -1.318540 + 0.227339I$ $b = 0.349925 - 0.133105I$	$1.03909 + 7.66938I$	$3.58752 - 6.84907I$
$u = -0.824749 + 0.684019I$ $a = 0.924018 + 0.059095I$ $b = -0.397533 + 0.099117I$	$2.67249 - 0.06243I$	$6.49122 - 0.13400I$
$u = -0.824749 - 0.684019I$ $a = 0.924018 - 0.059095I$ $b = -0.397533 - 0.099117I$	$2.67249 + 0.06243I$	$6.49122 + 0.13400I$
$u = 0.316783 + 0.857620I$ $a = 0.0626489 + 0.0577118I$ $b = -0.019035 + 0.639183I$	$0.59509 - 2.36713I$	$1.40991 + 3.67925I$
$u = 0.316783 - 0.857620I$ $a = 0.0626489 - 0.0577118I$ $b = -0.019035 - 0.639183I$	$0.59509 + 2.36713I$	$1.40991 - 3.67925I$
$u = 0.688053 + 0.891806I$ $a = 0.334387 + 0.540212I$ $b = 0.461704 + 0.711317I$	$-1.87950 + 2.72151I$	$1.13774 - 4.25269I$
$u = 0.688053 - 0.891806I$ $a = 0.334387 - 0.540212I$ $b = 0.461704 - 0.711317I$	$-1.87950 - 2.72151I$	$1.13774 + 4.25269I$
$u = -0.787218$ $a = 0.180911$ $b = -0.560374$	1.02845	10.2860
$u = 0.834451 + 0.915879I$ $a = 0.352399 - 0.454795I$ $b = 2.73766 + 0.36092I$	$-1.38798 + 2.82419I$	$0.59813 - 2.55909I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.834451 - 0.915879I$ $a = 0.352399 + 0.454795I$ $b = 2.73766 - 0.36092I$	$-1.38798 - 2.82419I$	$0.59813 + 2.55909I$
$u = 0.314005 + 0.468028I$ $a = 0.35394 - 1.75927I$ $b = 0.255305 - 0.819135I$	$-1.83062 + 1.07717I$	$-2.53581 - 1.58170I$
$u = 0.314005 - 0.468028I$ $a = 0.35394 + 1.75927I$ $b = 0.255305 + 0.819135I$	$-1.83062 - 1.07717I$	$-2.53581 + 1.58170I$
$u = 1.51494$ $a = 1.23042$ $b = 0.320247$	0.756608	8.01810
$u = -1.50875 + 0.34715I$ $a = -0.824302 - 0.166530I$ $b = 2.22948 - 1.08324I$	$-2.60567 + 1.37963I$	$-1.96914 - 4.05392I$
$u = -1.50875 - 0.34715I$ $a = -0.824302 + 0.166530I$ $b = 2.22948 + 1.08324I$	$-2.60567 - 1.37963I$	$-1.96914 + 4.05392I$
$u = 1.93298 + 1.06740I$ $a = -0.453811 + 0.766464I$ $b = 0.08195 + 1.96919I$	$18.8685 + 6.6483I$	$2.16489 - 2.21174I$
$u = 1.93298 - 1.06740I$ $a = -0.453811 - 0.766464I$ $b = 0.08195 - 1.96919I$	$18.8685 - 6.6483I$	$2.16489 + 2.21174I$
$u = -2.70737 + 1.34412I$ $a = 0.343417 + 0.565612I$ $b = -0.11926 + 2.26369I$	$18.7357 - 14.2573I$	$0. + 5.97304I$
$u = -2.70737 - 1.34412I$ $a = 0.343417 - 0.565612I$ $b = -0.11926 - 2.26369I$	$18.7357 + 14.2573I$	$0. - 5.97304I$

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 3.59990 + 1.47900I$ $a = -0.314174 + 0.597363I$ $b = 0.16845 + 2.06886I$	$-18.5925 + 5.6388I$	0
$u = 3.59990 - 1.47900I$ $a = -0.314174 - 0.597363I$ $b = 0.16845 - 2.06886I$	$-18.5925 - 5.6388I$	0
$u = -3.51025 + 2.07425I$ $a = 0.212826 + 0.620986I$ $b = -0.12859 + 2.14471I$	$-18.9745 + 1.9748I$	0
$u = -3.51025 - 2.07425I$ $a = 0.212826 - 0.620986I$ $b = -0.12859 - 2.14471I$	$-18.9745 - 1.9748I$	0

II. $\boldsymbol{I_2^u = \langle -967u^{11} - 301u^{10} + \cdots + 263b - 1376,\ -1506u^{11} - 552u^{10} + \cdots + 263a - 2561,\ u^{12} + u^{11} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 5.72624u^{11} + 2.09886u^{10} + \cdots + 14.5894u + 9.73764 \\ 3.67681u^{11} + 1.14449u^{10} + \cdots + 9.01521u + 5.23194 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 5.72624u^{11} + 2.09886u^{10} + \cdots + 14.5894u + 9.73764 \\ 1.23954u^{11} + 0.163498u^{10} + \cdots + 3.85932u + 1.60456 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -7.99620u^{11} - 1.69582u^{10} + \cdots - 17.4943u - 11.0380 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -10.4525u^{11} - 3.19772u^{10} + \cdots - 25.1787u - 16.4753 \\ 1.81369u^{11} + 1.09506u^{10} + \cdots + 4.22053u + 2.86312 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -7.99620u^{11} - 1.69582u^{10} + \cdots - 17.4943u - 11.0380 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 16.0380u^{11} + 5.04183u^{10} + \cdots + 39.0570u + 25.6198 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 7.99620u^{11} + 1.69582u^{10} + \cdots + 17.4943u + 11.0380 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 10.9962u^{11} + 3.69582u^{10} + \cdots + 22.4943u + 17.0380 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -12.2662u^{11} - 3.29278u^{10} + \cdots - 28.3992u - 17.3384 \\ 1.83270u^{11} + 0.615970u^{10} + \cdots + 3.74905u + 2.67300 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{9447}{263}u^{11} + \frac{3054}{263}u^{10} - \frac{11456}{263}u^9 - \frac{49096}{263}u^8 - \frac{14483}{263}u^7 + \frac{18808}{263}u^6 + \frac{35545}{263}u^5 + \frac{63461}{263}u^4 + \frac{61950}{263}u^3 + \frac{23143}{263}u^2 + \frac{19562}{263}u + \frac{13360}{263}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.815127 + 0.417821I$ $a = 0.746988 - 0.432355I$ $b = -0.167948 - 0.496751I$	$1.89061 + 1.10558I$	$3.63443 - 2.52768I$
$u = -0.815127 - 0.417821I$ $a = 0.746988 + 0.432355I$ $b = -0.167948 + 0.496751I$	$1.89061 - 1.10558I$	$3.63443 + 2.52768I$
$u = 0.045720 + 0.914831I$ $a = -0.747924 + 0.430733I$ $b = 0.514173 - 0.102928I$	$1.89061 + 2.95419I$	$6.39280 - 3.57892I$
$u = 0.045720 - 0.914831I$ $a = -0.747924 - 0.430733I$ $b = 0.514173 + 0.102928I$	$1.89061 - 2.95419I$	$6.39280 + 3.57892I$
$u = 0.288082 + 0.618530I$ $a = 0.07779 + 1.77253I$ $b = -0.483138 + 0.481819I$	$7.72290I$	$-2.53591 - 7.46338I$
$u = 0.288082 - 0.618530I$ $a = 0.07779 - 1.77253I$ $b = -0.483138 - 0.481819I$	$-7.72290I$	$-2.53591 + 7.46338I$
$u = -0.679704 + 0.059778I$ $a = 1.49615 + 0.95363I$ $b = -0.175699 + 0.659319I$	$-3.66314I$	$2.83009 + 6.37777I$
$u = -0.679704 - 0.059778I$ $a = 1.49615 - 0.95363I$ $b = -0.175699 - 0.659319I$	$3.66314I$	$2.83009 - 6.37777I$
$u = -0.93136 + 1.30101I$ $a = -0.214408 - 0.616830I$ $b = -2.00856 - 1.94349I$	$-1.89061 - 2.95419I$	$-7.91752 + 1.81989I$
$u = -0.93136 - 1.30101I$ $a = -0.214408 + 0.616830I$ $b = -2.00856 + 1.94349I$	$-1.89061 + 2.95419I$	$-7.91752 - 1.81989I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.59239 + 0.15607I$ $a = 0.641395 + 0.122732I$ $b = -0.67883 + 2.71121I$	$-1.89061 + 1.10558I$	$3.59610 - 6.57635I$
$u = 1.59239 - 0.15607I$ $a = 0.641395 - 0.122732I$ $b = -0.67883 - 2.71121I$	$-1.89061 - 1.10558I$	$3.59610 + 6.57635I$

III. $\boldsymbol{I_3^u = \langle u^7 - 3u^5 - u^4 + 4u^3 + 2u^2 + b - u - 2,\ -u^8 - u^7 + \cdots + a + 1,\ u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1\rangle}$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^8 + u^7 - 2u^6 - 3u^5 + u^4 + 3u^3 + 2u^2 - 1 \\ -u^7 + 3u^5 + u^4 - 4u^3 - 2u^2 + u + 2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^8 + u^7 - 2u^6 - 3u^5 + u^4 + 3u^3 + 2u^2 - 1 \\ -u^7 + 3u^5 + u^4 - 4u^3 - 2u^2 + 2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^8 + u^7 - 2u^6 - 3u^5 + u^4 + 3u^3 + 2u^2 - 1 \\ -u^7 + 3u^5 + u^4 - 4u^3 - 2u^2 + u + 2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^6 - u^4 + 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^3 \\ -u^5 + u^3 - u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^8 - u^7 + 7u^6 + 6u^5 - 6u^4 - 7u^3 - 5u^2 + 7u + 1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_6	u^9
c_4	$(u+1)^9$
c_5	$u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1$
c_7	$u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1$
c_8, c_{11}	$u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1$
c_9, c_{12}	$u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1$
c_{10}	$u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_6	y^9
c_5	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_7, c_{10}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_8, c_{11}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_9, c_{12}	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.772920 + 0.510351I$ $a = -0.900982 - 0.594909I$ $b = 1.126210 - 0.643329I$	$-3.42837 - 2.09337I$	$-4.41045 + 5.46639I$
$u = -0.772920 - 0.510351I$ $a = -0.900982 + 0.594909I$ $b = 1.126210 + 0.643329I$	$-3.42837 + 2.09337I$	$-4.41045 - 5.46639I$
$u = 0.825933$ $a = 1.21075$ $b = 0.564116$	-0.446489	-0.182090
$u = 1.173910 + 0.391555I$ $a = 0.766570 - 0.255687I$ $b = -0.466457 - 0.178345I$	$2.72642 + 1.33617I$	$8.07941 - 3.55369I$
$u = 1.173910 - 0.391555I$ $a = 0.766570 + 0.255687I$ $b = -0.466457 + 0.178345I$	$2.72642 - 1.33617I$	$8.07941 + 3.55369I$
$u = -0.141484 + 0.739668I$ $a = -0.249476 - 1.304240I$ $b = 1.50705 + 3.27928I$	$-1.02799 + 2.45442I$	$-2.24638 + 6.63381I$
$u = -0.141484 - 0.739668I$ $a = -0.249476 + 1.304240I$ $b = 1.50705 - 3.27928I$	$-1.02799 - 2.45442I$	$-2.24638 - 6.63381I$
$u = -1.172470 + 0.500383I$ $a = -0.721488 - 0.307914I$ $b = 0.551136 - 0.143741I$	$1.95319 - 7.08493I$	$8.66846 + 5.33071I$
$u = -1.172470 - 0.500383I$ $a = -0.721488 + 0.307914I$ $b = 0.551136 + 0.143741I$	$1.95319 + 7.08493I$	$8.66846 - 5.33071I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^9(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^{24}+24u^{23}+\cdots-179u+1)$
c_2	$((u-1)^9)(u^6+u^5+\cdots+u+1)^2(u^{24}-12u^{23}+\cdots+17u-1)$
c_3	$u^9(u^6-u^5+\cdots-u+1)^2(u^{24}+u^{23}+\cdots-2560u+512)$
c_4	$((u+1)^9)(u^6-u^5+\cdots-u+1)^2(u^{24}-12u^{23}+\cdots+17u-1)$
c_5	$(u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2$ $\cdot(u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1)$ $\cdot(u^{24}+4u^{23}+\cdots-3u-1)$
c_6	$u^9(u^6+u^5+\cdots+u+1)^2(u^{24}+u^{23}+\cdots-2560u+512)$
c_7	$(u^2+u+1)^6(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot(u^{24}+8u^{23}+\cdots+7u+1)$
c_8	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{12}+u^{11}+\cdots+3u+1)(u^{24}-5u^{23}+\cdots-389242u+249139)$
c_9	$(u^9+u^8+\cdots-u-1)(u^{12}+u^{11}+\cdots+3u+1)$ $\cdot(u^{24}+u^{23}+\cdots-74162u-19441)$
c_{10}	$(u^2-u+1)^6(u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1)$ $\cdot(u^{24}+8u^{23}+\cdots+7u+1)$
c_{11}	$(u^2+u+1)^6$ $\cdot(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{24}+20u^{22}+\cdots+19u+1)$
c_{12}	$u^{12}(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{24}+2u^{23}+\cdots+28672u+4096)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^9(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot\,(y^{24}+204y^{23}+\cdots-2901y+1)$
c_2, c_4	$(y-1)^9(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot\,(y^{24}-24y^{23}+\cdots+179y+1)$
c_3, c_6	$y^9(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot\,(y^{24}-63y^{23}+\cdots-3932160y+262144)$
c_5	$(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot\,(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot\,(y^{24}+26y^{22}+\cdots-y+1)$
c_7, c_{10}	$(y^2+y+1)^6$ $\cdot\,(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot\,(y^{24}+20y^{22}+\cdots+19y+1)$
c_8	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot\,(y^{12}-3y^{11}+\cdots-y+1)$ $\cdot\,(y^{24}+111y^{23}+\cdots-469614992544y+62070241321)$
c_9	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot\,(y^{12}-3y^{11}+\cdots-y+1)$ $\cdot\,(y^{24}-61y^{23}+\cdots-296113128y+377952481)$
c_{11}	$((y^2+y+1)^6)(y^9+7y^8+\cdots+13y-1)$ $\cdot\,(y^{24}+40y^{23}+\cdots+2151y+1)$
c_{12}	$y^{12}(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot\,(y^{24}-90y^{23}+\cdots+67108864y+16777216)$