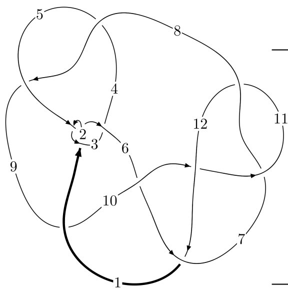
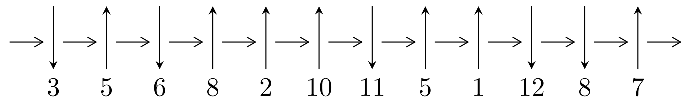
$12n_{0039}$ ($K12n_{0039}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{57} - u^{56} + \cdots + 2b - 4,\ 13u^{57} - 29u^{56} + \cdots + 2a - 9,\ u^{58} - 3u^{57} + \cdots - 3u + 1 \rangle$$
$$I_2^u = \langle -u^2a + b,\ -u^4a - u^3a + u^2a - u^3 + a^2 + au - u^2 + 1,\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 70 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. $I_1^u = \langle -u^{57} - u^{56} + \cdots + 2b - 4,\ 13u^{57} - 29u^{56} + \cdots + 2a - 9,\ u^{58} - 3u^{57} + \cdots - 3u + 1 \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -\frac{13}{2}u^{57} + \frac{29}{2}u^{56} + \cdots - \frac{33}{2}u + \frac{9}{2} \\ \frac{1}{2}u^{57} + \frac{1}{2}u^{56} + \cdots - \frac{1}{2}u + 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -\frac{7}{2}u^{57} + \frac{15}{2}u^{56} + \cdots - \frac{17}{2}u + \frac{3}{2} \\ \frac{3}{2}u^{57} - \frac{5}{2}u^{56} + \cdots - 3u^2 + \frac{5}{2}u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^8 - u^6 + u^4 + 1 \\ u^{10} - 2u^8 + 3u^6 - 2u^4 + u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -5u^{57} + 11u^{56} + \cdots - \frac{23}{2}u + \frac{7}{2} \\ u^{57} - u^{56} + \cdots + \frac{3}{2}u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{57} + 2u^{56} + \cdots - \frac{3}{2}u + \frac{3}{2} \\ \frac{1}{2}u^{54} - \frac{1}{2}u^{53} + \cdots + \frac{1}{2}u^2 + \frac{1}{2}u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^{11} + 2u^9 - 2u^7 + u^3 \\ -u^{11} + 3u^9 - 4u^7 + 3u^5 - u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 12u^{57} - \frac{51}{2}u^{56} + \cdots + \frac{53}{2}u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{58} + 35u^{57} + \cdots + 9u + 1$
c_2, c_5	$u^{58} + 7u^{57} + \cdots + 5u + 1$
c_3	$u^{58} - 7u^{57} + \cdots - 27u + 2$
c_4, c_8	$u^{58} - u^{57} + \cdots + 8192u + 4096$
c_6	$u^{58} - 3u^{57} + \cdots + 2221u + 937$
c_7, c_{11}	$u^{58} + 3u^{57} + \cdots + 3u + 1$
c_9	$u^{58} + 3u^{57} + \cdots + 3u + 1$
c_{10}	$u^{58} + 29u^{57} + \cdots + 3u + 1$
c_{12}	$u^{58} + 9u^{57} + \cdots + 689u + 176$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{58} - 17y^{57} + \cdots + 213y + 1$
c_2, c_5	$y^{58} + 35y^{57} + \cdots + 9y + 1$
c_3	$y^{58} - 69y^{57} + \cdots - 217y + 4$
c_4, c_8	$y^{58} + 65y^{57} + \cdots + 234881024y + 16777216$
c_6	$y^{58} + 11y^{57} + \cdots - 1936315y + 877969$
c_7, c_{11}	$y^{58} - 29y^{57} + \cdots - 3y + 1$
c_9	$y^{58} + 71y^{57} + \cdots - 3y + 1$
c_{10}	$y^{58} + 3y^{57} + \cdots + 29y + 1$
c_{12}	$y^{58} + 23y^{57} + \cdots + 427807y + 30976$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.742693 + 0.676776I$ $a = 1.10927 + 1.46827I$ $b = -1.018590 - 0.353888I$	$-6.05935 - 7.31192I$	$0.79047 + 6.14491I$
$u = 0.742693 - 0.676776I$ $a = 1.10927 - 1.46827I$ $b = -1.018590 + 0.353888I$	$-6.05935 + 7.31192I$	$0.79047 - 6.14491I$
$u = 0.766215 + 0.621161I$ $a = -1.04148 - 1.38838I$ $b = 1.014310 + 0.129064I$	$-2.46464 - 2.40510I$	$3.55783 + 3.26427I$
$u = 0.766215 - 0.621161I$ $a = -1.04148 + 1.38838I$ $b = 1.014310 - 0.129064I$	$-2.46464 + 2.40510I$	$3.55783 - 3.26427I$
$u = 0.965439 + 0.350364I$ $a = -0.543909 - 0.897747I$ $b = 0.404805 - 0.591191I$	$-1.64630 - 1.27469I$	$-1.46430 + 0.39248I$
$u = 0.965439 - 0.350364I$ $a = -0.543909 + 0.897747I$ $b = 0.404805 + 0.591191I$	$-1.64630 + 1.27469I$	$-1.46430 - 0.39248I$
$u = 0.830822 + 0.646667I$ $a = 1.15502 + 1.22562I$ $b = -1.220950 - 0.029193I$	$-6.32401 + 2.24227I$	0
$u = 0.830822 - 0.646667I$ $a = 1.15502 - 1.22562I$ $b = -1.220950 + 0.029193I$	$-6.32401 - 2.24227I$	0
$u = 1.067360 + 0.176258I$ $a = -1.04041 + 1.60217I$ $b = -1.155750 + 0.597676I$	$-3.60243 + 0.04887I$	$-5.83111 + 0.I$
$u = 1.067360 - 0.176258I$ $a = -1.04041 - 1.60217I$ $b = -1.155750 - 0.597676I$	$-3.60243 - 0.04887I$	$-5.83111 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.282860 + 0.819808I$ $a = 0.45994 - 1.98856I$ $b = 1.20420 + 3.10728I$	$-8.53365 + 9.60020I$	$0.29238 - 5.04135I$
$u = 0.282860 - 0.819808I$ $a = 0.45994 + 1.98856I$ $b = 1.20420 - 3.10728I$	$-8.53365 - 9.60020I$	$0.29238 + 5.04135I$
$u = -1.066250 + 0.414950I$ $a = -0.25930 + 2.89782I$ $b = 1.64743 + 2.38773I$	$-2.23944 + 0.13129I$	0
$u = -1.066250 - 0.414950I$ $a = -0.25930 - 2.89782I$ $b = 1.64743 - 2.38773I$	$-2.23944 - 0.13129I$	0
$u = 1.051460 + 0.470149I$ $a = -0.92877 - 1.78383I$ $b = 1.42872 - 1.74233I$	$-0.78474 - 1.84538I$	0
$u = 1.051460 - 0.470149I$ $a = -0.92877 + 1.78383I$ $b = 1.42872 + 1.74233I$	$-0.78474 + 1.84538I$	0
$u = 0.213505 + 0.811297I$ $a = 0.52309 - 2.11889I$ $b = 0.41666 + 3.33148I$	$-9.55678 - 0.64630I$	$-1.020161 + 0.779335I$
$u = 0.213505 - 0.811297I$ $a = 0.52309 + 2.11889I$ $b = 0.41666 - 3.33148I$	$-9.55678 + 0.64630I$	$-1.020161 - 0.779335I$
$u = -0.413914 + 0.728124I$ $a = 0.200276 + 0.074948I$ $b = -0.458662 - 0.847775I$	$0.99825 - 2.10282I$	$0.620949 - 0.071334I$
$u = -0.413914 - 0.728124I$ $a = 0.200276 - 0.074948I$ $b = -0.458662 + 0.847775I$	$0.99825 + 2.10282I$	$0.620949 + 0.071334I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.258688 + 0.794593I$ $a = -0.52040 + 2.05773I$ $b = -0.84030 - 3.00010I$	$-4.98964 + 4.15775I$	$2.66640 - 2.12473I$
$u = 0.258688 - 0.794593I$ $a = -0.52040 - 2.05773I$ $b = -0.84030 + 3.00010I$	$-4.98964 - 4.15775I$	$2.66640 + 2.12473I$
$u = -1.060250 + 0.490356I$ $a = -0.10148 - 1.91006I$ $b = -1.30941 - 1.14927I$	$-0.61621 + 4.67232I$	0
$u = -1.060250 - 0.490356I$ $a = -0.10148 + 1.91006I$ $b = -1.30941 + 1.14927I$	$-0.61621 - 4.67232I$	0
$u = -0.501104 + 0.655716I$ $a = -0.0331531 - 0.0143983I$ $b = -0.466931 + 0.591950I$	$1.49411 - 0.06269I$	$3.02061 + 1.27535I$
$u = -0.501104 - 0.655716I$ $a = -0.0331531 + 0.0143983I$ $b = -0.466931 - 0.591950I$	$1.49411 + 0.06269I$	$3.02061 - 1.27535I$
$u = -1.046050 + 0.556065I$ $a = 0.395453 - 1.090660I$ $b = -0.524046 - 0.784867I$	$-0.12505 + 4.79073I$	0
$u = -1.046050 - 0.556065I$ $a = 0.395453 + 1.090660I$ $b = -0.524046 + 0.784867I$	$-0.12505 - 4.79073I$	0
$u = 1.135510 + 0.371005I$ $a = 2.45266 + 0.82876I$ $b = 0.97469 + 2.43445I$	$-5.61981 - 0.51916I$	0
$u = 1.135510 - 0.371005I$ $a = 2.45266 - 0.82876I$ $b = 0.97469 - 2.43445I$	$-5.61981 + 0.51916I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.094110 + 0.493111I$ $a = 1.25150 + 2.49948I$ $b = -1.88271 + 2.81236I$	$-1.62734 - 6.95830I$	0
$u = 1.094110 - 0.493111I$ $a = 1.25150 - 2.49948I$ $b = -1.88271 - 2.81236I$	$-1.62734 + 6.95830I$	0
$u = -1.185760 + 0.284132I$ $a = -0.65680 + 4.29093I$ $b = 2.21766 + 4.41254I$	$-9.47227 - 0.82173I$	0
$u = -1.185760 - 0.284132I$ $a = -0.65680 - 4.29093I$ $b = 2.21766 - 4.41254I$	$-9.47227 + 0.82173I$	0
$u = -1.199640 + 0.258578I$ $a = 1.04819 - 4.24993I$ $b = -1.69840 - 4.66322I$	$-13.2521 - 6.3035I$	0
$u = -1.199640 - 0.258578I$ $a = 1.04819 + 4.24993I$ $b = -1.69840 + 4.66322I$	$-13.2521 + 6.3035I$	0
$u = -1.087500 + 0.582128I$ $a = -1.317980 + 0.269553I$ $b = -0.386637 + 1.148330I$	$-0.97594 + 7.10425I$	0
$u = -1.087500 - 0.582128I$ $a = -1.317980 - 0.269553I$ $b = -0.386637 - 1.148330I$	$-0.97594 - 7.10425I$	0
$u = -1.136660 + 0.500162I$ $a = 1.47085 + 2.25651I$ $b = 2.79786 + 0.33790I$	$-4.72739 + 7.37382I$	0
$u = -1.136660 - 0.500162I$ $a = 1.47085 - 2.25651I$ $b = 2.79786 - 0.33790I$	$-4.72739 - 7.37382I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.203940 + 0.312053I$ $a = 0.40507 - 4.64412I$ $b = -2.83156 - 4.64587I$	$-13.9557 + 4.2640I$	0
$u = -1.203940 - 0.312053I$ $a = 0.40507 + 4.64412I$ $b = -2.83156 + 4.64587I$	$-13.9557 - 4.2640I$	0
$u = -0.660650 + 0.306406I$ $a = 0.914280 - 0.165501I$ $b = 0.997317 - 0.499930I$	$-0.62635 + 2.91588I$	$3.27340 - 4.97212I$
$u = -0.660650 - 0.306406I$ $a = 0.914280 + 0.165501I$ $b = 0.997317 + 0.499930I$	$-0.62635 - 2.91588I$	$3.27340 + 4.97212I$
$u = 1.157920 + 0.552647I$ $a = 1.67092 + 3.72168I$ $b = -2.68114 + 4.31965I$	$-7.63974 - 9.17351I$	0
$u = 1.157920 - 0.552647I$ $a = 1.67092 - 3.72168I$ $b = -2.68114 - 4.31965I$	$-7.63974 + 9.17351I$	0
$u = 1.160620 + 0.568042I$ $a = -1.47283 - 3.87780I$ $b = 2.98552 - 4.18011I$	$-11.1402 - 14.7500I$	0
$u = 1.160620 - 0.568042I$ $a = -1.47283 + 3.87780I$ $b = 2.98552 + 4.18011I$	$-11.1402 + 14.7500I$	0
$u = 1.174810 + 0.538366I$ $a = -2.03584 - 3.78686I$ $b = 2.49310 - 4.78492I$	$-12.40280 - 4.33791I$	0
$u = 1.174810 - 0.538366I$ $a = -2.03584 + 3.78686I$ $b = 2.49310 + 4.78492I$	$-12.40280 + 4.33791I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.172748+0.667933I$ $a=-0.405277+0.856827I$ $b=\ \ 1.48790-0.60667I$	$-2.02121-2.91480I$	$-0.43838+3.64289I$
$u=-0.172748-0.667933I$ $a=-0.405277-0.856827I$ $b=\ \ 1.48790+0.60667I$	$-2.02121+2.91480I$	$-0.43838-3.64289I$
$u=-0.406360+0.529126I$ $a=-0.238632-0.235635I$ $b=-0.732719+0.328694I$	$1.267410-0.491154I$	$7.40856+1.29163I$
$u=-0.406360-0.529126I$ $a=-0.238632+0.235635I$ $b=-0.732719-0.328694I$	$1.267410+0.491154I$	$7.40856-1.29163I$
$u=\ \ 0.447120+0.450989I$ $a=-0.61398-2.20773I$ $b=\ \ 0.687783+0.451795I$	$0.99990-2.08688I$	$2.42768+5.77119I$
$u=\ \ 0.447120-0.450989I$ $a=-0.61398+2.20773I$ $b=\ \ 0.687783-0.451795I$	$0.99990+2.08688I$	$2.42768-5.77119I$
$u=\ \ 0.291693+0.528701I$ $a=\ \ 0.15373+2.35394I$ $b=-0.550148-1.147150I$	$0.62843+2.75213I$	$0.46673-2.33667I$
$u=\ \ 0.291693-0.528701I$ $a=\ \ 0.15373-2.35394I$ $b=-0.550148+1.147150I$	$0.62843-2.75213I$	$0.46673+2.33667I$

II. $I_2^u =$
$\langle -u^2a+b,\ -u^4a-u^3a+u^2a-u^3+a^2+au-u^2+1,\ u^6+u^5-u^4-2u^3+u+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5u^5a-u^4a+4u^3a+4u^4+2u^2a-u^3-4au-5u^2-4u+3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = 0.578212 + 1.125030I$ $b = -0.136196 + 1.374220I$	$-1.89061 + 1.10558I$	$-0.42156 - 3.46269I$
$u = 1.002190 + 0.295542I$ $a = -1.263410 - 0.061767I$ $b = -1.122010 - 0.805060I$	$-1.89061 - 2.95419I$	$-3.93112 + 4.16322I$
$u = 1.002190 - 0.295542I$ $a = 0.578212 - 1.125030I$ $b = -0.136196 - 1.374220I$	$-1.89061 - 1.10558I$	$-0.42156 + 3.46269I$
$u = 1.002190 - 0.295542I$ $a = -1.263410 + 0.061767I$ $b = -1.122010 + 0.805060I$	$-1.89061 + 2.95419I$	$-3.93112 - 4.16322I$
$u = -0.428243 + 0.664531I$ $a = 0.224551 + 0.930349I$ $b = 0.471538 - 0.368031I$	$1.89061 + 1.10558I$	$5.61650 - 2.84542I$
$u = -0.428243 + 0.664531I$ $a = 0.693431 - 0.659641I$ $b = -0.554493 - 0.224349I$	$1.89061 - 2.95419I$	$7.50338 + 4.33850I$
$u = -0.428243 - 0.664531I$ $a = 0.224551 - 0.930349I$ $b = 0.471538 + 0.368031I$	$1.89061 - 1.10558I$	$5.61650 + 2.84542I$
$u = -0.428243 - 0.664531I$ $a = 0.693431 + 0.659641I$ $b = -0.554493 + 0.224349I$	$1.89061 + 2.95419I$	$7.50338 - 4.33850I$
$u = -1.073950 + 0.558752I$ $a = -0.036219 + 0.825237I$ $b = 0.959936 + 0.737627I$	$3.66314I$	$1.09315 - 1.33646I$
$u = -1.073950 + 0.558752I$ $a = -0.696567 - 0.443985I$ $b = -1.118770 + 0.462515I$	$7.72290I$	$4.13964 - 9.04329I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.073950 - 0.558752I$ $a = -0.036219 - 0.825237I$ $b = 0.959936 - 0.737627I$	$-\,3.66314I$	$1.09315 + 1.33646I$
$u = -1.073950 - 0.558752I$ $a = -0.696567 + 0.443985I$ $b = -1.118770 - 0.462515I$	$-\,7.72290I$	$4.13964 + 9.04329I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^6)(u^{58}+35u^{57}+\cdots+9u+1)$
c_2	$((u^2+u+1)^6)(u^{58}+7u^{57}+\cdots+5u+1)$
c_3	$((u^2-u+1)^6)(u^{58}-7u^{57}+\cdots-27u+2)$
c_4, c_8	$u^{12}(u^{58}-u^{57}+\cdots+8192u+4096)$
c_5	$((u^2-u+1)^6)(u^{58}+7u^{57}+\cdots+5u+1)$
c_6	$((u^6-u^5-u^4+2u^3-u+1)^2)(u^{58}-3u^{57}+\cdots+2221u+937)$
c_7	$((u^6+u^5-u^4-2u^3+u+1)^2)(u^{58}+3u^{57}+\cdots+3u+1)$
c_9	$((u^6-u^5-u^4+2u^3-u+1)^2)(u^{58}+3u^{57}+\cdots+3u+1)$
c_{10}	$((u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2)(u^{58}+29u^{57}+\cdots+3u+1)$
c_{11}	$((u^6-u^5-u^4+2u^3-u+1)^2)(u^{58}+3u^{57}+\cdots+3u+1)$
c_{12}	$((u^6-3u^5+5u^4-4u^3+2u^2-u+1)^2)(u^{58}+9u^{57}+\cdots+689u+176)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^6)(y^{58}-17y^{57}+\cdots+213y+1)$
c_2, c_5	$((y^2+y+1)^6)(y^{58}+35y^{57}+\cdots+9y+1)$
c_3	$((y^2+y+1)^6)(y^{58}-69y^{57}+\cdots-217y+4)$
c_4, c_8	$y^{12}(y^{58}+65y^{57}+\cdots+2.34881\times 10^8 y+1.67772\times 10^7)$
c_6	$(y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2$ $\cdot(y^{58}+11y^{57}+\cdots-1936315y+877969)$
c_7, c_{11}	$((y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2)(y^{58}-29y^{57}+\cdots-3y+1)$
c_9	$((y^6-3y^5+5y^4-4y^3+2y^2-y+1)^2)(y^{58}+71y^{57}+\cdots-3y+1)$
c_{10}	$((y^6+y^5+5y^4+6y^2+3y+1)^2)(y^{58}+3y^{57}+\cdots+29y+1)$
c_{12}	$(y^6+y^5+5y^4+6y^2+3y+1)^2$ $\cdot(y^{58}+23y^{57}+\cdots+427807y+30976)$