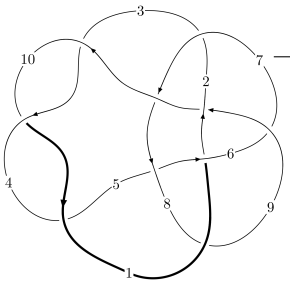
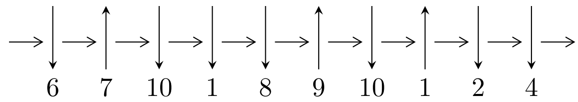
10_{159} $(K10n_{34})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$
\begin{aligned}
I_1^u = \langle & -31u^8 + 18u^7 + 76u^6 - 39u^5 - 208u^4 + 102u^3 + 226u^2 + 25b - 20u - 72, \\
& -108u^8 + 49u^7 + 243u^6 - 77u^5 - 694u^4 + 261u^3 + 693u^2 + 25a + 65u - 196, \\
& u^9 - u^8 - 2u^7 + 2u^6 + 6u^5 - 6u^4 - 5u^3 + 3u^2 + 2u - 1\rangle \\
I_2^u = \langle & 1002u^{13} - 332u^{12} + \cdots + 1889b + 2916,\ -2310u^{13} + 279u^{12} + \cdots + 1889a - 9392, \\
& u^{14} + u^{11} + 3u^{10} + 2u^9 - 7u^8 + 7u^7 - u^6 + 11u^5 - 14u^4 + 9u^3 - 5u^2 + 5u - 1\rangle \\
I_3^u = \langle & u^2 + b - 1,\ u^2 + a + u,\ u^3 - u + 1\rangle \\
I_4^u = \langle & b - u + 1,\ a + u - 1,\ u^2 - u - 1\rangle \\
I_5^u = \langle & b + 1,\ a - 1,\ u + 1\rangle
\end{aligned}
$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 29 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. $I_1^u = \langle -31u^8 + 18u^7 + \cdots + 25b - 72,\ -108u^8 + 49u^7 + \cdots + 25a - 196,\ u^9 - u^8 + \cdots + 2u - 1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 4.32000u^8 - 1.96000u^7 + \cdots - 2.60000u + 7.84000 \\ \frac{31}{25}u^8 - \frac{18}{25}u^7 + \cdots + \frac{4}{5}u + \frac{72}{25} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 5.56000u^8 - 2.68000u^7 + \cdots - 1.80000u + 10.7200 \\ \frac{31}{25}u^8 - \frac{18}{25}u^7 + \cdots + \frac{4}{5}u + \frac{72}{25} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1.76000u^8 + 1.28000u^7 + \cdots - 2.20000u - 5.12000 \\ \frac{48}{25}u^8 - \frac{19}{25}u^7 + \cdots - \frac{3}{5}u + \frac{76}{25} \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{4}{25}u^8 + \frac{13}{25}u^7 + \cdots - \frac{14}{5}u - \frac{52}{25} \\ \frac{48}{25}u^8 - \frac{19}{25}u^7 + \cdots - \frac{3}{5}u + \frac{76}{25} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 5.56000u^8 - 2.68000u^7 + \cdots - 2.80000u + 10.7200 \\ \frac{31}{25}u^8 - \frac{18}{25}u^7 + \cdots + \frac{4}{5}u + \frac{72}{25} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2.76000u^8 + 2.28000u^7 + \cdots - 4.20000u - 9.12000 \\ \frac{12}{5}u^8 - \frac{6}{5}u^7 + \cdots - 2u + \frac{19}{5} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{16}{5}u^8 - \frac{3}{5}u^7 + \cdots - 6u + \frac{17}{5} \\ 3.04000u^8 - 1.12000u^7 + \cdots - 1.20000u + 5.48000 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{96}{25}u^8 + \frac{13}{25}u^7 + \frac{216}{25}u^6 - \frac{24}{25}u^5 - \frac{653}{25}u^4 + \frac{82}{25}u^3 + \frac{691}{25}u^2 + \frac{26}{5}u - \frac{377}{25}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^9 - u^8 - 2u^7 + 2u^6 + 6u^5 - 6u^4 - 5u^3 + 3u^2 + 2u - 1$
c_2, c_8	$u^9 - 4u^7 + 7u^5 - 2u^4 - 4u^3 - u^2 + 3u + 1$
c_3, c_4, c_{10}	$u^9 + 5u^8 + 12u^7 + 12u^6 - 6u^5 - 38u^4 - 57u^3 - 49u^2 - 24u - 5$
c_5, c_7	$u^9 + 6u^7 + 4u^6 + 15u^5 + 18u^4 + 18u^3 + 19u^2 + 7u + 1$
c_6	$u^9 + 7u^8 + 22u^7 + 44u^6 + 72u^5 + 102u^4 + 103u^3 + 59u^2 + 18u + 5$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^9 - 5y^8 + 20y^7 - 50y^6 + 90y^5 - 118y^4 + 89y^3 - 41y^2 + 10y - 1$
c_2, c_8	$y^9 - 8y^8 + 30y^7 - 64y^6 + 87y^5 - 84y^4 + 54y^3 - 21y^2 + 11y - 1$
c_3, c_4, c_{10}	$y^9 - y^8 + 12y^7 - 22y^6 + 22y^5 - 110y^4 - 67y^3 - 45y^2 + 86y - 25$
c_5, c_7	$y^9 + 12y^8 + \cdots + 11y - 1$
c_6	$y^9 - 5y^8 + 12y^7 + 10y^6 - 50y^5 - 42y^4 + 725y^3 - 793y^2 - 266y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.675360 + 0.321360I$ $a = \quad 0.375927 - 0.035170I$ $b = -0.490473 + 0.554222I$	$-1.230240 + 0.388380I$	$-8.56083 - 2.01333I$
$u = -0.675360 - 0.321360I$ $a = \quad 0.375927 + 0.035170I$ $b = -0.490473 - 0.554222I$	$-1.230240 - 0.388380I$	$-8.56083 + 2.01333I$
$u = \quad 1.27629$ $a = -0.656695$ $b = -0.328475$	-6.80161	-15.9820
$u = -1.16884 + 0.87463I$ $a = -0.616776 + 0.922983I$ $b = \quad 1.299660 + 0.083541I$	$5.93576 + 3.11393I$	$-2.06870 - 2.32890I$
$u = -1.16884 - 0.87463I$ $a = -0.616776 - 0.922983I$ $b = \quad 1.299660 - 0.083541I$	$5.93576 - 3.11393I$	$-2.06870 + 2.32890I$
$u = \quad 0.523277 + 0.089360I$ $a = -0.56707 - 2.28589I$ $b = \quad 0.883398 - 0.665684I$	$0.97258 - 2.76102I$	$-6.12756 + 2.10529I$
$u = \quad 0.523277 - 0.089360I$ $a = -0.56707 + 2.28589I$ $b = \quad 0.883398 + 0.665684I$	$0.97258 + 2.76102I$	$-6.12756 - 2.10529I$
$u = \quad 1.18278 + 0.96607I$ $a = \quad 1.136270 + 0.521152I$ $b = -1.52834 + 0.58529I$	$5.94738 - 11.74060I$	$-3.25195 + 6.67016I$
$u = \quad 1.18278 - 0.96607I$ $a = \quad 1.136270 - 0.521152I$ $b = -1.52834 - 0.58529I$	$5.94738 + 11.74060I$	$-3.25195 - 6.67016I$

II. $\boldsymbol{I_2^u = \langle 1002u^{13} - 332u^{12} + \cdots + 1889b + 2916,\ -2310u^{13} + 279u^{12} + \cdots + 1889a - 9392,\ u^{14} + u^{11} + \cdots + 5u - 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1.22287u^{13} - 0.147697u^{12} + \cdots - 5.55214u + 4.97194 \\ -0.530439u^{13} + 0.175754u^{12} + \cdots + 1.11223u - 1.54367 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.692430u^{13} + 0.0280572u^{12} + \cdots - 4.43992u + 3.42827 \\ -0.530439u^{13} + 0.175754u^{12} + \cdots + 1.11223u - 1.54367 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.967708u^{13} - 0.0831128u^{12} + \cdots - 6.71572u + 5.12758 \\ -0.582319u^{13} - 0.0725251u^{12} + \cdots + 2.92959u - 1.74854 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.385389u^{13} - 0.155638u^{12} + \cdots - 3.78613u + 3.37904 \\ -0.582319u^{13} - 0.0725251u^{12} + \cdots + 2.92959u - 1.74854 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^{13} + u^{10} + 3u^9 + 2u^8 - 7u^7 + 7u^6 - u^5 + 11u^4 - 14u^3 + 9u^2 - 5u + 5 \\ -0.307570u^{13} + 0.0280572u^{12} + \cdots + 1.56008u - 1.57173 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1.36316u^{13} - 0.737957u^{12} + \cdots + 1.72155u - 2.43409 \\ -0.238221u^{13} + 0.288512u^{12} + \cdots + 2.83483u - 0.124404 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.592377u^{13} + 0.0492324u^{12} + \cdots - 5.14929u + 2.67602 \\ 0.206988u^{13} + 0.204870u^{12} + \cdots + 0.636845u - 0.703017 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1965}{1889}u^{13} + \frac{5491}{1889}u^{12} + \cdots - \frac{3549}{1889}u + \frac{3230}{1889}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^{14} + u^{11} + \cdots + 5u - 1$
c_2, c_8	$u^{14} - 6u^{12} + \cdots - 9u + 1$
c_3, c_4, c_{10}	$(u^7 - 2u^6 + 2u^5 + u^4 - 2u^3 + 3u^2 - 2u + 1)^2$
c_5, c_7	$u^{14} - 3u^{13} + \cdots - 6u - 1$
c_6	$(u^7 - 3u^6 + 3u^5 + 2u^4 - 6u^3 + 3u^2 + 3u - 2)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^{14} + 6y^{12} + \cdots - 15y + 1$
c_2, c_8	$y^{14} - 12y^{13} + \cdots - 63y + 1$
c_3, c_4, c_{10}	$(y^7 + 4y^5 - y^4 - 6y^3 - 3y^2 - 2y - 1)^2$
c_5, c_7	$y^{14} + 13y^{13} + \cdots + 42y + 1$
c_6	$(y^7 - 3y^6 + 9y^5 - 16y^4 + 30y^3 - 37y^2 + 21y - 4)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.877499 + 0.643882I$ $a = -0.815701 - 0.730313I$ $b = 1.36033 - 0.47577I$	$2.12977 - 2.53884I$	$0.86344 + 1.81085I$
$u = 0.877499 - 0.643882I$ $a = -0.815701 + 0.730313I$ $b = 1.36033 + 0.47577I$	$2.12977 + 2.53884I$	$0.86344 - 1.81085I$
$u = 0.763487 + 0.442848I$ $a = -0.149425 - 0.086700I$ $b = 0.33250 - 1.47887I$	$0.33600 - 4.72329I$	$-7.01907 + 9.17288I$
$u = 0.763487 - 0.442848I$ $a = -0.149425 + 0.086700I$ $b = 0.33250 + 1.47887I$	$0.33600 + 4.72329I$	$-7.01907 - 9.17288I$
$u = -0.796980 + 0.997104I$ $a = 1.285810 - 0.554607I$ $b = -1.011450 - 0.500189I$	$0.33600 + 4.72329I$	$-7.01907 - 9.17288I$
$u = -0.796980 - 0.997104I$ $a = 1.285810 + 0.554607I$ $b = -1.011450 + 0.500189I$	$0.33600 - 4.72329I$	$-7.01907 + 9.17288I$
$u = -0.775231 + 1.031020I$ $a = -1.276240 + 0.214140I$ $b = 1.62238 + 0.39283I$	$7.17429 + 3.91715I$	$-1.20398 - 3.00324I$
$u = -0.775231 - 1.031020I$ $a = -1.276240 - 0.214140I$ $b = 1.62238 - 0.39283I$	$7.17429 - 3.91715I$	$-1.20398 + 3.00324I$
$u = -0.196138 + 0.662538I$ $a = 0.30408 - 2.08007I$ $b = 0.162591 + 0.048461I$	$2.12977 + 2.53884I$	$0.86344 - 1.81085I$
$u = -0.196138 - 0.662538I$ $a = 0.30408 + 2.08007I$ $b = 0.162591 - 0.048461I$	$2.12977 - 2.53884I$	$0.86344 + 1.81085I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.81203 + 1.22658I$ $a = 0.961913 + 0.622177I$ $b = -1.361880 - 0.158001I$	$7.17429 + 3.91715I$	$-1.20398 - 3.00324I$
$u = 0.81203 - 1.22658I$ $a = 0.961913 - 0.622177I$ $b = -1.361880 + 0.158001I$	$7.17429 - 3.91715I$	$-1.20398 + 3.00324I$
$u = -1.60968$ $a = 0.365698$ $b = -0.746600$	-2.83077	1.71920
$u = 0.240340$ $a = 4.01341$ $b = -1.46232$	-2.83077	1.71920

III. $\boldsymbol{I^u_3 = \langle u^2 + b - 1,\ u^2 + a + u,\ u^3 - u + 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 - u \\ -u^2 + 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -2u^2 - u + 1 \\ -u^2 + 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 - 2 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -2 \\ -u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2u^2 + 1 \\ -u^2 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^2 - 2u - 2 \\ -2u + 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -2u^2 - 2u - 1 \\ -2u^2 + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^2 + 5u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_9	$u^3 - u + 1$
c_2, c_8	$u^3 + u^2 - 1$
c_3, c_4	$u^3 - 2u^2 + u - 1$
c_5, c_7	$u^3 + u^2 + 2u + 1$
c_6	$u^3 + 4u^2 + 7u + 5$
c_{10}	$u^3 + 2u^2 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_9	$y^3 - 2y^2 + y - 1$
c_2, c_8	$y^3 - y^2 + 2y - 1$
c_3, c_4, c_{10}	$y^3 - 2y^2 - 3y - 1$
c_5, c_7	$y^3 + 3y^2 + 2y - 1$
c_6	$y^3 - 2y^2 + 9y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.662359 + 0.562280I$ $a = -0.78492 - 1.30714I$ $b = 0.877439 - 0.744862I$	$1.45094 - 3.77083I$	$-1.95284 + 7.28057I$
$u = 0.662359 - 0.562280I$ $a = -0.78492 + 1.30714I$ $b = 0.877439 + 0.744862I$	$1.45094 + 3.77083I$	$-1.95284 - 7.28057I$
$u = -1.32472$ $a = -0.430160$ $b = -0.754878$	-6.19175	-2.09430

IV. $I^u_4 = \langle b - u + 1,\ a + u - 1,\ u^2 - u - 1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u+1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u+1 \\ u-1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u-1 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} -u+1 \\ -1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.618034$ $a = 1.61803$ $b = -1.61803$	-3.28987	-17.0000
$u = 1.61803$ $a = -0.618034$ $b = 0.618034$	-3.28987	-17.0000

V. $I_5^u = \langle b+1,\ a-1,\ u+1 \rangle$

(i) Arc colorings

$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_2 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_9 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

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

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

$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_3 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_5 c_7, c_8, c_9	$u+1$
c_3, c_4, c_6 c_{10}	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_7, c_8, c_9	$y - 1$
c_3, c_4, c_6 c_{10}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \quad 1.00000$ $b = -1.00000$	-1.64493	-6.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_9	$(u+1)(u^2-u-1)(u^3-u+1)$ $\cdot(u^9-u^8-2u^7+2u^6+6u^5-6u^4-5u^3+3u^2+2u-1)$ $\cdot(u^{14}+u^{11}+\cdots+5u-1)$
c_2, c_8	$(u+1)(u^2-u-1)(u^3+u^2-1)(u^9-4u^7+\cdots+3u+1)$ $\cdot(u^{14}-6u^{12}+\cdots-9u+1)$
c_3, c_4	$u(u+1)^2(u^3-2u^2+u-1)$ $\cdot(u^7-2u^6+2u^5+u^4-2u^3+3u^2-2u+1)^2$ $\cdot(u^9+5u^8+12u^7+12u^6-6u^5-38u^4-57u^3-49u^2-24u-5)$
c_5, c_7	$(u-1)^2(u+1)(u^3+u^2+2u+1)$ $\cdot(u^9+6u^7+4u^6+15u^5+18u^4+18u^3+19u^2+7u+1)$ $\cdot(u^{14}-3u^{13}+\cdots-6u-1)$
c_6	$u^3(u^3+4u^2+7u+5)(u^7-3u^6+3u^5+2u^4-6u^3+3u^2+3u-2)^2$ $\cdot(u^9+7u^8+22u^7+44u^6+72u^5+102u^4+103u^3+59u^2+18u+5)$
c_{10}	$u(u-1)^2(u^3+2u^2+u+1)$ $\cdot(u^7-2u^6+2u^5+u^4-2u^3+3u^2-2u+1)^2$ $\cdot(u^9+5u^8+12u^7+12u^6-6u^5-38u^4-57u^3-49u^2-24u-5)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_9	$(y-1)(y^2-3y+1)(y^3-2y^2+y-1)$ $\cdot(y^9-5y^8+20y^7-50y^6+90y^5-118y^4+89y^3-41y^2+10y-1)$ $\cdot(y^{14}+6y^{12}+\cdots-15y+1)$
c_2, c_8	$(y-1)(y^2-3y+1)(y^3-y^2+2y-1)$ $\cdot(y^9-8y^8+30y^7-64y^6+87y^5-84y^4+54y^3-21y^2+11y-1)$ $\cdot(y^{14}-12y^{13}+\cdots-63y+1)$
c_3, c_4, c_{10}	$y(y-1)^2(y^3-2y^2-3y-1)(y^7+4y^5-y^4-6y^3-3y^2-2y-1)^2$ $\cdot(y^9-y^8+12y^7-22y^6+22y^5-110y^4-67y^3-45y^2+86y-25)$
c_5, c_7	$((y-1)^3)(y^3+3y^2+2y-1)(y^9+12y^8+\cdots+11y-1)$ $\cdot(y^{14}+13y^{13}+\cdots+42y+1)$
c_6	$y^3(y^3-2y^2+9y-25)$ $\cdot(y^7-3y^6+9y^5-16y^4+30y^3-37y^2+21y-4)^2$ $\cdot(y^9-5y^8+12y^7+10y^6-50y^5-42y^4+725y^3-793y^2-266y-25)$