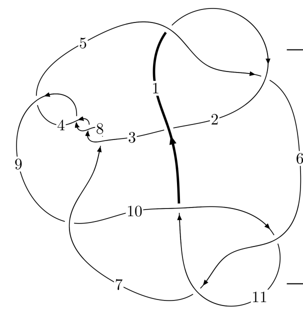
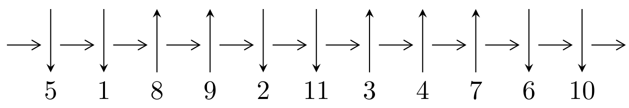
$11a_{106}$ $(K11a_{106})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle b - u, \\
&\quad u^{17} - u^{16} - 3u^{15} + 4u^{14} + 6u^{13} - 9u^{12} - 4u^{11} + 11u^{10} + 2u^9 - 9u^8 + 4u^7 + 4u^6 - 2u^4 + 4u^3 + u^2 + 2a + 2u \\
&\quad u^{19} - u^{18} + \cdots - 2u^2 + 1\rangle \\
I_2^u &= \langle -37263u^{29} - 111490u^{28} + \cdots + 162577b + 113039, \\
&\quad 125314u^{29} - 274067u^{28} + \cdots + 162577a + 438193,\ u^{30} - u^{29} + \cdots + 2u - 1\rangle \\
I_3^u &= \langle b + 1,\ a + 2,\ u - 1\rangle \\
I_4^u &= \langle b - 1,\ a^2 - 4a + 2,\ u + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 52 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. $I^u_1 = \langle b - u,\ u^{17} - u^{16} + \cdots + 2a - 1,\ u^{19} - u^{18} + \cdots - 2u^2 + 1\rangle$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -\frac{1}{2}u^{17} + \frac{1}{2}u^{16} + \cdots - u + \frac{1}{2} \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{1}{2}u^{18} - \frac{1}{2}u^{17} + \cdots - \frac{1}{2}u + 1 \\ -u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{1}{2}u^{17} + \frac{1}{2}u^{16} + \cdots - u + \frac{1}{2} \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^{18} - u^{17} + \cdots - u + 1 \\ \frac{1}{2}u^{18} - \frac{1}{2}u^{17} + \cdots + \frac{1}{2}u^3 - \frac{1}{2}u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{18} - \frac{3}{2}u^{17} + \cdots - 2u + \frac{3}{2} \\ -\frac{1}{2}u^{18} + \frac{1}{2}u^{17} + \cdots - \frac{1}{2}u^3 + \frac{1}{2}u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{18} - \frac{3}{2}u^{17} + \cdots - 2u + \frac{3}{2} \\ -\frac{1}{2}u^{18} + \frac{1}{2}u^{17} + \cdots - \frac{1}{2}u^3 + \frac{1}{2}u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2u^{18} - u^{17} - 9u^{16} + 5u^{15} + 26u^{14} - 14u^{13} - 43u^{12} + 26u^{11} + 51u^{10} - 34u^9 - 31u^8 + 32u^7 + 12u^6 - 20u^5 + 6u^4 + 10u^3 + 5u^2 - 4u - 1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_6 c_{10}	$u^{19} + u^{18} + \cdots + 2u^2 - 1$
c_2, c_{11}	$u^{19} + 9u^{18} + \cdots + 4u + 1$
c_3, c_4, c_7 c_8	$u^{19} + 3u^{18} + \cdots + 2u - 2$
c_9	$u^{19} + 3u^{18} + \cdots + 16u - 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_6 c_{10}	$y^{19} - 9y^{18} + \cdots + 4y - 1$
c_2, c_{11}	$y^{19} + 7y^{18} + \cdots - 4y - 1$
c_3, c_4, c_7 c_8	$y^{19} - 21y^{18} + \cdots - 4y - 4$
c_9	$y^{19} + 7y^{18} + \cdots + 2816y - 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.812789 + 0.553417I$ $a = -0.76890 - 1.22204I$ $b = -0.812789 + 0.553417I$	$1.82665 + 4.33190I$	$3.09756 - 7.93622I$
$u = -0.812789 - 0.553417I$ $a = -0.76890 + 1.22204I$ $b = -0.812789 - 0.553417I$	$1.82665 - 4.33190I$	$3.09756 + 7.93622I$
$u = 0.865007 + 0.704905I$ $a = 1.072110 - 0.840866I$ $b = 0.865007 + 0.704905I$	$10.08310 - 5.40272I$	$4.82648 + 5.68964I$
$u = 0.865007 - 0.704905I$ $a = 1.072110 + 0.840866I$ $b = 0.865007 - 0.704905I$	$10.08310 + 5.40272I$	$4.82648 - 5.68964I$
$u = 0.347731 + 0.806765I$ $a = 0.287964 - 0.269780I$ $b = 0.347731 + 0.806765I$	$8.56139 + 2.84598I$	$6.12727 - 0.57057I$
$u = 0.347731 - 0.806765I$ $a = 0.287964 + 0.269780I$ $b = 0.347731 - 0.806765I$	$8.56139 - 2.84598I$	$6.12727 + 0.57057I$
$u = -1.072710 + 0.432309I$ $a = -1.91340 - 1.91365I$ $b = -1.072710 + 0.432309I$	$0.89681 + 2.96240I$	$-1.25513 - 4.67576I$
$u = -1.072710 - 0.432309I$ $a = -1.91340 + 1.91365I$ $b = -1.072710 - 0.432309I$	$0.89681 - 2.96240I$	$-1.25513 + 4.67576I$
$u = 1.135950 + 0.496880I$ $a = 2.09240 - 1.47882I$ $b = 1.135950 + 0.496880I$	$-4.68926 - 6.06103I$	$-4.96256 + 4.06889I$
$u = 1.135950 - 0.496880I$ $a = 2.09240 + 1.47882I$ $b = 1.135950 - 0.496880I$	$-4.68926 + 6.06103I$	$-4.96256 - 4.06889I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.651125 + 0.371544I$ $a = -0.115490 - 1.188520I$ $b = 0.651125 + 0.371544I$	$-0.69486 - 1.46005I$	$-2.24162 + 4.71190I$
$u = 0.651125 - 0.371544I$ $a = -0.115490 + 1.188520I$ $b = 0.651125 - 0.371544I$	$-0.69486 + 1.46005I$	$-2.24162 - 4.71190I$
$u = -1.171910 + 0.539955I$ $a = -2.14090 - 1.24940I$ $b = -1.171910 + 0.539955I$	$-3.93034 + 10.41950I$	$-3.27524 - 9.24443I$
$u = -1.171910 - 0.539955I$ $a = -2.14090 + 1.24940I$ $b = -1.171910 - 0.539955I$	$-3.93034 - 10.41950I$	$-3.27524 + 9.24443I$
$u = -0.686077$ $a = 1.90633$ $b = -0.686077$	2.96406	4.32400
$u = -0.296841 + 0.610442I$ $a = -0.117122 - 0.390719I$ $b = -0.296841 + 0.610442I$	$1.19212 - 1.04367I$	$4.57560 + 2.19936I$
$u = -0.296841 - 0.610442I$ $a = -0.117122 + 0.390719I$ $b = -0.296841 - 0.610442I$	$1.19212 + 1.04367I$	$4.57560 - 2.19936I$
$u = 1.197470 + 0.579281I$ $a = 2.15018 - 1.07944I$ $b = 1.197470 + 0.579281I$	$3.36659 - 13.40010I$	$-0.05434 + 8.12876I$
$u = 1.197470 - 0.579281I$ $a = 2.15018 + 1.07944I$ $b = 1.197470 - 0.579281I$	$3.36659 + 13.40010I$	$-0.05434 - 8.12876I$

II.
$\boldsymbol{I_2^u = \langle -3.73\times 10^4 u^{29} - 1.11\times 10^5 u^{28} + \cdots + 1.63\times 10^5 b + 1.13\times 10^5,\ 1.25\times 10^5 u^{29} - 2.74\times 10^5 u^{28} + \cdots + 1.63\times 10^5 a + 4.38\times 10^5,\ u^{30} - u^{29} + \cdots + 2u - 1\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.770798u^{29} + 1.68577u^{28} + \cdots + 0.897808u - 2.69530 \\ 0.229202u^{29} + 0.685767u^{28} + \cdots - 1.10219u - 0.695295 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.219674u^{29} + 0.569613u^{28} + \cdots + 3.03192u - 2.26358 \\ 0.914970u^{29} - 0.354884u^{28} + \cdots - 1.15370u - 0.770798 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.667228u^{29} + 1.85414u^{28} + \cdots + 1.11916u - 3.08601 \\ 0.892857u^{29} + 0.684771u^{28} + \cdots - 3.48157u - 0.171045 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.120681u^{29} + 0.253677u^{28} + \cdots + 3.97856u - 2.66124 \\ 1.47694u^{29} - 0.641395u^{28} + \cdots - 1.62083u - 1.34137 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1.35965u^{29} + 0.714234u^{28} + \cdots + 4.37797u - 3.99301 \\ 0.147635u^{29} - 0.397719u^{28} + \cdots - 1.70941u - 2.11106 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1.35965u^{29} + 0.714234u^{28} + \cdots + 4.37797u - 3.99301 \\ 0.147635u^{29} - 0.397719u^{28} + \cdots - 1.70941u - 2.11106 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{174400}{162577}u^{29} + \frac{211456}{162577}u^{28} + \cdots - \frac{402552}{162577}u + \frac{413650}{162577}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5, c_6 c_{10}	$u^{30} + u^{29} + \cdots - 2u - 1$
c_2, c_{11}	$u^{30} + 17u^{29} + \cdots + 8u^2 + 1$
c_3, c_4, c_7 c_8	$(u^{15} - u^{14} + \cdots - 2u - 1)^2$
c_9	$(u^{15} + 3u^{14} + \cdots - 4u^2 + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_6 c_{10}	$y^{30} - 17y^{29} + \cdots + 8y^2 + 1$
c_2, c_{11}	$y^{30} - 9y^{29} + \cdots + 16y + 1$
c_3, c_4, c_7 c_8	$(y^{15} - 17y^{14} + \cdots + 8y - 1)^2$
c_9	$(y^{15} + 7y^{14} + \cdots + 8y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.716927 + 0.736174I$ $a = 0.0379780 - 0.0389976I$ $b = 0.716927 - 0.736174I$	10.5121	$5.97706 + 0.I$
$u = 0.716927 - 0.736174I$ $a = 0.0379780 + 0.0389976I$ $b = 0.716927 + 0.736174I$	10.5121	$5.97706 + 0.I$
$u = 0.246680 + 0.896428I$ $a = 0.846092 + 0.456626I$ $b = 1.131460 - 0.580385I$	$6.22908 + 8.01682I$	$3.04132 - 4.89679I$
$u = 0.246680 - 0.896428I$ $a = 0.846092 - 0.456626I$ $b = 1.131460 + 0.580385I$	$6.22908 - 8.01682I$	$3.04132 + 4.89679I$
$u = 1.12548$ $a = -1.67481$ $b = -0.786295$	-2.69194	4.62820
$u = 1.053770 + 0.396631I$ $a = -0.660279 - 0.334663I$ $b = 0.170936 - 0.647526I$	$-1.99092 - 1.64925I$	$-2.39367 + 0.16522I$
$u = 1.053770 - 0.396631I$ $a = -0.660279 + 0.334663I$ $b = 0.170936 + 0.647526I$	$-1.99092 + 1.64925I$	$-2.39367 - 0.16522I$
$u = -0.651659 + 0.523428I$ $a = 0.281100 + 0.225787I$ $b = -0.651659 - 0.523428I$	2.23561	$5.03935 + 0.I$
$u = -0.651659 - 0.523428I$ $a = 0.281100 - 0.225787I$ $b = -0.651659 + 0.523428I$	2.23561	$5.03935 + 0.I$
$u = -0.212223 + 0.801752I$ $a = -0.793447 + 0.659092I$ $b = -1.101980 - 0.506508I$	$-1.10658 - 5.45324I$	$-0.00468 + 6.35130I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.212223 - 0.801752I$ $a = -0.793447 - 0.659092I$ $b = -1.101980 + 0.506508I$	$-1.10658 + 5.45324I$	$-0.00468 - 6.35130I$
$u = -1.176320 + 0.122445I$ $a = 1.120030 - 0.323137I$ $b = 0.279034 - 0.410677I$	$3.47397 - 0.15908I$	$1.79403 - 0.85194I$
$u = -1.176320 - 0.122445I$ $a = 1.120030 + 0.323137I$ $b = 0.279034 + 0.410677I$	$3.47397 + 0.15908I$	$1.79403 + 0.85194I$
$u = 1.087970 + 0.476458I$ $a = -2.06013 + 0.62143I$ $b = -1.288900 + 0.283680I$	$1.23287 - 4.11725I$	$-1.40312 + 3.71929I$
$u = 1.087970 - 0.476458I$ $a = -2.06013 - 0.62143I$ $b = -1.288900 - 0.283680I$	$1.23287 + 4.11725I$	$-1.40312 - 3.71929I$
$u = -1.134360 + 0.387877I$ $a = 1.99836 + 0.59003I$ $b = 1.209080 + 0.320151I$	$-5.46412 + 1.81248I$	$-5.85619 - 4.33913I$
$u = -1.134360 - 0.387877I$ $a = 1.99836 - 0.59003I$ $b = 1.209080 - 0.320151I$	$-5.46412 - 1.81248I$	$-5.85619 + 4.33913I$
$u = -1.101980 + 0.506508I$ $a = 0.536960 - 0.457402I$ $b = -0.212223 - 0.801752I$	$-1.10658 + 5.45324I$	$-0.00468 - 6.35130I$
$u = -1.101980 - 0.506508I$ $a = 0.536960 + 0.457402I$ $b = -0.212223 + 0.801752I$	$-1.10658 - 5.45324I$	$-0.00468 + 6.35130I$
$u = -0.786295$ $a = 2.39726$ $b = 1.12548$	-2.69194	4.62820

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.209080 + 0.320151I$ $a = -1.90725 + 0.59253I$ $b = -1.134360 + 0.387877I$	$-5.46412 + 1.81248I$	$-5.85619 - 4.33913I$
$u = 1.209080 - 0.320151I$ $a = -1.90725 - 0.59253I$ $b = -1.134360 - 0.387877I$	$-5.46412 - 1.81248I$	$-5.85619 + 4.33913I$
$u = 1.131460 + 0.580385I$ $a = -0.453027 - 0.537511I$ $b = 0.246680 - 0.896428I$	$6.22908 - 8.01682I$	$3.04132 + 4.89679I$
$u = 1.131460 - 0.580385I$ $a = -0.453027 + 0.537511I$ $b = 0.246680 + 0.896428I$	$6.22908 + 8.01682I$	$3.04132 - 4.89679I$
$u = -1.288900 + 0.283680I$ $a = 1.82798 + 0.63933I$ $b = 1.087970 + 0.476458I$	$1.23287 - 4.11725I$	$-1.40312 + 3.71929I$
$u = -1.288900 - 0.283680I$ $a = 1.82798 - 0.63933I$ $b = 1.087970 - 0.476458I$	$1.23287 + 4.11725I$	$-1.40312 - 3.71929I$
$u = 0.170936 + 0.647526I$ $a = 0.672650 + 1.047100I$ $b = 1.053770 - 0.396631I$	$-1.99092 + 1.64925I$	$-2.39367 - 0.16522I$
$u = 0.170936 - 0.647526I$ $a = 0.672650 - 1.047100I$ $b = 1.053770 + 0.396631I$	$-1.99092 - 1.64925I$	$-2.39367 + 0.16522I$
$u = 0.279034 + 0.410677I$ $a = -2.30824 + 1.54348I$ $b = -1.176320 - 0.122445I$	$3.47397 + 0.15908I$	$1.79403 + 0.85194I$
$u = 0.279034 - 0.410677I$ $a = -2.30824 - 1.54348I$ $b = -1.176320 + 0.122445I$	$3.47397 - 0.15908I$	$1.79403 - 0.85194I$

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

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2 \\ -1 \end{pmatrix}$$

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

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

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

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

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

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

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u - 1$
c_2, c_5, c_{10} c_{11}	$u + 1$
c_3, c_4, c_7 c_8, c_9	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6, c_{10}, c_{11}	$y-1$
c_3, c_4, c_7 c_8, c_9	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -2.00000$ $b = -1.00000$	-3.28987	-12.0000

IV. $I_4^u = \langle b-1,\ a^2-4a+2,\ u+1\rangle$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} -a+1 \\ -1 \end{pmatrix}$$

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

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

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

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

$$a_4 = \begin{pmatrix} -2a+3 \\ -a+1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \quad 0.585786$ $b = \quad 1.00000$	1.64493	−4.00000
$u = -1.00000$ $a = \quad 3.41421$ $b = \quad 1.00000$	1.64493	−4.00000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_6	$(u-1)(u+1)^2(u^{19}+u^{18}+\cdots+2u^2-1)(u^{30}+u^{29}+\cdots-2u-1)$
c_2, c_{11}	$((u+1)^3)(u^{19}+9u^{18}+\cdots+4u+1)(u^{30}+17u^{29}+\cdots+8u^2+1)$
c_3, c_4, c_7 c_8	$u(u^2-2)(u^{15}-u^{14}+\cdots-2u-1)^2(u^{19}+3u^{18}+\cdots+2u-2)$
c_5, c_{10}	$((u-1)^2)(u+1)(u^{19}+u^{18}+\cdots+2u^2-1)(u^{30}+u^{29}+\cdots-2u-1)$
c_9	$u^3(u^{15}+3u^{14}+\cdots-4u^2+1)^2(u^{19}+3u^{18}+\cdots+16u-16)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5, c_6 c_{10}	$((y-1)^3)(y^{19} - 9y^{18} + \cdots + 4y - 1)(y^{30} - 17y^{29} + \cdots + 8y^2 + 1)$
c_2, c_{11}	$((y-1)^3)(y^{19} + 7y^{18} + \cdots - 4y - 1)(y^{30} - 9y^{29} + \cdots + 16y + 1)$
c_3, c_4, c_7 c_8	$y(y-2)^2(y^{15} - 17y^{14} + \cdots + 8y - 1)^2(y^{19} - 21y^{18} + \cdots - 4y - 4)$
c_9	$y^3(y^{15} + 7y^{14} + \cdots + 8y - 1)^2(y^{19} + 7y^{18} + \cdots + 2816y - 256)$