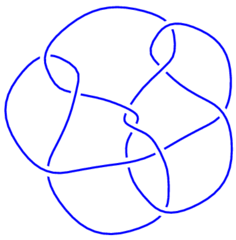
$11n_{136}$ $(K11n_{136})$



1

Arc Sequences

$$\rightarrow\downarrow_{6}\rightarrow\downarrow_{1}\rightarrow\downarrow_{9}\rightarrow\downarrow_{7}\rightarrow\downarrow_{10}\rightarrow\downarrow_{2}\rightarrow\downarrow_{4}\rightarrow\downarrow_{1}\rightarrow\downarrow_{5}\rightarrow\downarrow_{9}\rightarrow\downarrow_{4}\rightarrow$$

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{5} I_i^u$$

$$\begin{aligned}
I_1^u &= \langle u-1,\ a,\ b+1\rangle \\
I_2^u &= \langle u^6-u^5-u^4+2u^3-3u^2+2u-1,\ b+u,\ -u^4+2u^2+a-u+1\rangle \\
I_3^u &= \langle u^6-3u^5+2u^4+u^3-3u^2+2u-1,\ b-u+1,\ -u^5+3u^4-u^3-3u^2+a+3u-1\rangle \\
I_4^u &= \langle u^{12}+2u^{11}-7u^{10}-13u^9+22u^8+32u^7-37u^6-30u^5+31u^4+6u^3-6u^2-3u+1,\ b+u, \\
&\quad 166u^{11}+369u^{10}+\cdots+169a-288\rangle \\
I_5^u &= \langle u^{30}+2u^{29}+\cdots-66u-79, \\
&\quad -5.14017\times10^{40}u^{29}-4.96074\times10^{40}u^{28}+\cdots+4.56302\times10^{41}b+6.36971\times10^{42}, \\
&\quad -2.43559\times10^{42}u^{29}-7.16169\times10^{42}u^{28}+\cdots+3.60479\times10^{43}a-1.96694\times10^{44}\rangle
\end{aligned}$$

There are 5 irreducible components with 55 representations.

[1]The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I. $\boldsymbol{I_1^u = \langle u-1,\ a,\ b+1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}0\\1\end{pmatrix}$$
$$a_9 = \begin{pmatrix}0\\-1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_3 = \begin{pmatrix}0\\1\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\1\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-1\\-1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-1\\1\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0\\1\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1\\-1\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1\\-2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1\\-2\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0$ $b = -1.00000$	-4.93480	-18.0000

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.58749$ $a = -1.27668$ $b = 1.58749$	-10.0050	-16.0412
$u = 0.056351 - 0.865615I$ $a = 1.095746 - 0.524927I$ $b = -0.056351 + 0.865615I$	$0.69572 + 5.66603I$	$-8.99565 - 5.65371I$
$u = 0.056351 + 0.865615I$ $a = 1.095746 + 0.524927I$ $b = -0.056351 - 0.865615I$	$0.69572 - 5.66603I$	$-8.99565 + 5.65371I$
$u = 0.520377 - 0.559444I$ $a = -0.732480 + 0.654168I$ $b = -0.520377 + 0.559444I$	$3.09094 + 3.67876I$	$-6.55000 - 7.14850I$
$u = 0.520377 + 0.559444I$ $a = -0.732480 - 0.654168I$ $b = -0.520377 - 0.559444I$	$3.09094 - 3.67876I$	$-6.55000 + 7.14850I$
$u = 1.43404$ $a = 0.550153$ $b = -1.43404$	-4.14809	-6.86752

III.

$$I^u_3 = \langle u^6 - 3u^5 + 2u^4 + u^3 - 3u^2 + 2u - 1,\ b - u + 1,\ -u^5 + 3u^4 - u^3 - 3u^2 + a + 3u - 1\rangle$$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.04852$ $a=\ \ 1.39776$ $b=-2.04852$	-7.71260	-26.4539
$u=\ \ 0.210979-0.638344I$ $a=-1.010648+0.698701I$ $b=-0.789021-0.638344I$	$2.21137+1.58317I$	$-8.77306+1.69425I$
$u=\ \ 0.210979+0.638344I$ $a=-1.010648-0.698701I$ $b=-0.789021+0.638344I$	$2.21137-1.58317I$	$-8.77306-1.69425I$
$u=\ \ 0.789021-0.638344I$ $a=\ \ 0.669484-0.462841I$ $b=-0.210979-0.638344I$	$2.21137-1.58317I$	$-8.77306-1.69425I$
$u=\ \ 0.789021+0.638344I$ $a=\ \ 0.669484+0.462841I$ $b=-0.210979+0.638344I$	$2.21137+1.58317I$	$-8.77306+1.69425I$
$u=\ \ 2.04852$ $a=-0.715431$ $b=\ \ 1.04852$	-7.71260	-26.4539

IV.

$\boldsymbol{I_4^u = \langle u^{12} + 2u^{11} + \cdots - 3u + 1,\ b + u,\ 166u^{11} + 369u^{10} + \cdots + 169a - 288\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} -0.982249u^{11} - 2.18343u^{10} + \cdots - 0.710059u + 1.70414 \\ -u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.840237u^{11} - 1.65089u^{10} + \cdots - 4.39053u + 2.33728 \\ 0.633136u^{11} + 1.12426u^{10} + \cdots + 0.674556u - 0.218935 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.207101u^{11} - 0.526627u^{10} + \cdots - 3.71598u + 2.11834 \\ 0.633136u^{11} + 1.12426u^{10} + \cdots + 0.674556u - 0.218935 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.982249u^{11} - 2.18343u^{10} + \cdots - 1.71006u + 1.70414 \\ -u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.982249u^{11} - 2.18343u^{10} + \cdots - 1.71006u + 1.70414 \\ 0.633136u^{11} + 1.12426u^{10} + \cdots - 1.32544u - 0.218935 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.426036u^{11} - 0.597633u^{10} + \cdots + 5.04142u - 1.89941 \\ 0.171598u^{11} - 0.106509u^{10} + \cdots + 0.136095u + 0.473373 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.112426u^{11} + 0.171598u^{10} + \cdots - 1.49704u + 0.792899 \\ -0.0414201u^{11} + 0.0946746u^{10} + \cdots - 1.34320u + 0.0236686 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.248521u^{11} - 0.431953u^{10} + \cdots - 1.05917u + 1.14201 \\ 0.142012u^{11} - 0.467456u^{10} + \cdots - 1.68047u + 0.633136 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.248521u^{11} - 0.431953u^{10} + \cdots - 1.05917u + 1.14201 \\ 0.142012u^{11} - 0.467456u^{10} + \cdots - 1.68047u + 0.633136 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.77190-0.53892I$ $a=-1.076764-0.037721I$ $b=\ \ 1.77190+0.53892I$	$-7.6014-13.7948I$	$-13.8218+7.4992I$
$u=-1.77190+0.53892I$ $a=-1.076764+0.037721I$ $b=\ \ 1.77190-0.53892I$	$-7.6014+13.7948I$	$-13.8218-7.4992I$
$u=-1.72036-0.03367I$ $a=-0.923801+0.441615I$ $b=\ \ 1.72036+0.03367I$	$-9.15791+5.54846I$	$-14.9776-4.7158I$
$u=-1.72036+0.03367I$ $a=-0.923801-0.441615I$ $b=\ \ 1.72036-0.03367I$	$-9.15791-5.54846I$	$-14.9776+4.7158I$
$u=-0.385507-0.310495I$ $a=\ \ 0.89688+2.08681I$ $b=\ \ 0.385507+0.310495I$	$2.70102+2.45198I$	$-9.00502-1.91716I$
$u=-0.385507+0.310495I$ $a=\ \ 0.89688-2.08681I$ $b=\ \ 0.385507-0.310495I$	$2.70102-2.45198I$	$-9.00502+1.91716I$
$u=\ \ 0.264871$ $a=\ \ 1.36172$ $b=-0.264871$	-0.612207	-16.2730
$u=\ \ 0.678073-0.310386I$ $a=\ \ 0.86009-2.09158I$ $b=-0.678073+0.310386I$	$-1.13692-4.86316I$	$-15.3188+3.9545I$
$u=\ \ 0.678073+0.310386I$ $a=\ \ 0.86009+2.09158I$ $b=-0.678073-0.310386I$	$-1.13692+4.86316I$	$-15.3188-3.9545I$
$u=\ \ 1.14566$ $a=\ \ 0.194228$ $b=-1.14566$	-4.93861	-18.1860

Solution to I^u_4	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.49443 - 0.38475I$ $a = 0.965619 + 0.097254I$ $b = -1.49443 + 0.38475I$	$-1.76862 + 2.36514I$	$-8.64736 - 0.93899I$
$u = 1.49443 + 0.38475I$ $a = 0.965619 - 0.097254I$ $b = -1.49443 - 0.38475I$	$-1.76862 - 2.36514I$	$-8.64736 + 0.93899I$

V. $\boldsymbol{I_5^u =}$
$\boldsymbol{\langle u^{30}+2u^{29}+\cdots-66u-79,\ -5.14\times10^{40}u^{29}-4.96\times10^{40}u^{28}+\cdots+4.56\times10^{41}b+6.37\times10^{42},\ -2.44\times10^{42}u^{29}-7.16\times10^{42}u^{28}+\cdots+3.60\times10^{43}a-1.97\times10^{44}\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.0675654u^{29} + 0.198672u^{28} + \cdots + 17.0406u + 5.45647 \\ 0.112648u^{29} + 0.108716u^{28} + \cdots + 22.9117u - 13.9594 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.164982u^{29} + 0.393738u^{28} + \cdots + 44.6296u + 9.56552 \\ -0.256101u^{29} - 0.612130u^{28} + \cdots - 60.7640u - 21.0783 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0911189u^{29} - 0.218392u^{28} + \cdots - 16.1344u - 11.5128 \\ -0.256101u^{29} - 0.612130u^{28} + \cdots - 60.7640u - 21.0783 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.180214u^{29} + 0.307388u^{28} + \cdots + 39.9524u - 8.50294 \\ 0.112648u^{29} + 0.108716u^{28} + \cdots + 22.9117u - 13.9594 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.180214u^{29} + 0.307388u^{28} + \cdots + 39.9524u - 8.50294 \\ 0.0554301u^{29} + 0.0308805u^{28} + \cdots + 12.1755u - 9.76926 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.189781u^{29} + 0.545825u^{28} + \cdots + 64.8850u + 35.9629 \\ 0.0153590u^{29} + 0.0911915u^{28} + \cdots + 22.7845u + 11.3153 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.140549u^{29} + 0.168848u^{28} + \cdots + 11.5189u - 20.3136 \\ 0.000758985u^{29} - 0.0658007u^{28} + \cdots - 13.6852u - 16.3414 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.203041u^{29} + 0.606896u^{28} + \cdots + 71.6076u + 32.1207 \\ 0.142608u^{29} + 0.246809u^{28} + \cdots + 31.3399u + 3.40162 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.203041u^{29} + 0.606896u^{28} + \cdots + 71.6076u + 32.1207 \\ 0.142608u^{29} + 0.246809u^{28} + \cdots + 31.3399u + 3.40162 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.79388-0.09420I$ $a=-1.108314-0.024265I$ $b=\ \ 1.45017-0.51636I$	$-10.17636+2.57627I$	$-15.0709-4.0254I$
$u=-1.79388+0.09420I$ $a=-1.108314+0.024265I$ $b=\ \ 1.45017+0.51636I$	$-10.17636-2.57627I$	$-15.0709+4.0254I$
$u=-1.65186-0.31915I$ $a=\ \ 1.063152+0.008618I$ $b=-1.66298-0.62132I$	$-4.38929-7.65996I$	$-11.60171+4.83891I$
$u=-1.65186+0.31915I$ $a=\ \ 1.063152-0.008618I$ $b=-1.66298+0.62132I$	$-4.38929+7.65996I$	$-11.60171-4.83891I$
$u=-1.46931-0.07774I$ $a=\ \ 1.004278-0.274861I$ $b=-1.82057-0.02441I$	$-6.55037+0.76607I$	$-13.52677-0.03940I$
$u=-1.46931+0.07774I$ $a=\ \ 1.004278+0.274861I$ $b=-1.82057+0.02441I$	$-6.55037-0.76607I$	$-13.52677+0.03940I$
$u=-1.45017-0.51636I$ $a=-1.183107+0.523275I$ $b=\ \ 1.79388-0.09420I$	$-10.17636-2.57627I$	$-15.0709+4.0254I$
$u=-1.45017+0.51636I$ $a=-1.183107-0.523275I$ $b=\ \ 1.79388+0.09420I$	$-10.17636+2.57627I$	$-15.0709-4.0254I$
$u=-0.990302$ $a=\ \ 1.62073$ $b=-1.93654$	-7.32542	-4.72892
$u=-0.674810-0.174597I$ $a=\ \ 1.076875+0.877302I$ $b=-0.627325+0.826408I$	$1.85339+2.65754I$	$-12.13634-3.34510I$

Solution to I_5^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.674810 + 0.174597I$ $a = 1.076875 - 0.877302I$ $b = -0.627325 - 0.826408I$	$1.85339 - 2.65754I$	$-12.13634 + 3.34510I$
$u = -0.572998 - 0.112628I$ $a = 0.052794 + 0.870427I$ $b = -0.186932 + 0.933368I$	$2.10570 + 2.66884I$	$-8.49589 - 5.19452I$
$u = -0.572998 + 0.112628I$ $a = 0.052794 - 0.870427I$ $b = -0.186932 - 0.933368I$	$2.10570 - 2.66884I$	$-8.49589 + 5.19452I$
$u = 0.186932 - 0.933368I$ $a = 0.533860 - 0.034297I$ $b = 0.572998 + 0.112628I$	$2.10570 + 2.66884I$	$-8.49589 - 5.19452I$
$u = 0.186932 + 0.933368I$ $a = 0.533860 + 0.034297I$ $b = 0.572998 - 0.112628I$	$2.10570 - 2.66884I$	$-8.49589 + 5.19452I$
$u = 0.23544 - 1.52005I$ $a = 0.134071 - 0.431702I$ $b = -0.581176 + 0.044236I$	$-0.89474 + 6.09921I$	$-15.4033 - 6.7831I$
$u = 0.23544 + 1.52005I$ $a = 0.134071 + 0.431702I$ $b = -0.581176 - 0.044236I$	$-0.89474 - 6.09921I$	$-15.4033 + 6.7831I$
$u = 0.314929 - 1.087779I$ $a = 0.356643 + 0.537841I$ $b = -0.710560 - 0.015696I$	$0.330230 - 0.679087I$	$-12.40066 + 0.76832I$
$u = 0.314929 + 1.087779I$ $a = 0.356643 - 0.537841I$ $b = -0.710560 + 0.015696I$	$0.330230 + 0.679087I$	$-12.40066 - 0.76832I$
$u = 0.581176 - 0.044236I$ $a = -1.028829 - 0.603856I$ $b = -0.23544 + 1.52005I$	$-0.89474 + 6.09921I$	$-15.4033 - 6.7831I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.581176 + 0.044236I$ $a = -1.028829 + 0.603856I$ $b = -0.23544 - 1.52005I$	$-0.89474 - 6.09921I$	$-15.4033 + 6.7831I$
$u = 0.627325 - 0.826408I$ $a = 0.264607 - 0.894844I$ $b = 0.674810 + 0.174597I$	$1.85339 + 2.65754I$	$-12.13634 - 3.34510I$
$u = 0.627325 + 0.826408I$ $a = 0.264607 + 0.894844I$ $b = 0.674810 - 0.174597I$	$1.85339 - 2.65754I$	$-12.13634 + 3.34510I$
$u = 0.710560 - 0.015696I$ $a = 0.974165 + 0.329118I$ $b = -0.314929 - 1.087779I$	$0.330230 + 0.679087I$	$-12.40066 - 0.76832I$
$u = 0.710560 + 0.015696I$ $a = 0.974165 - 0.329118I$ $b = -0.314929 + 1.087779I$	$0.330230 - 0.679087I$	$-12.40066 + 0.76832I$
$u = 1.66298 - 0.62132I$ $a = -0.994935 - 0.159133I$ $b = 1.65186 - 0.31915I$	$-4.38929 + 7.65996I$	$-11.60171 - 4.83891I$
$u = 1.66298 + 0.62132I$ $a = -0.994935 + 0.159133I$ $b = 1.65186 + 0.31915I$	$-4.38929 - 7.65996I$	$-11.60171 + 4.83891I$
$u = 1.82057 - 0.02441I$ $a = -0.819704 - 0.189938I$ $b = 1.46931 - 0.07774I$	$-6.55037 - 0.76607I$	$-13.52677 + 0.03940I$
$u = 1.82057 + 0.02441I$ $a = -0.819704 + 0.189938I$ $b = 1.46931 + 0.07774I$	$-6.55037 + 0.76607I$	$-13.52677 - 0.03940I$
$u = 1.93654$ $a = -0.828805$ $b = 0.990302$	-7.32542	-4.72892

VI. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_5	$(u+1)(u^6-2u^4+2u^2+u-1)(u^6-2u^4-u^3+2u^2-1)$ $(u^{12}-u^{11}+\cdots+2u-1)(u^{30}+u^{29}+\cdots+2u^2+1)$
c_2, c_{10}	$(u+1)(u^6+4u^5+8u^4+10u^3+8u^2+5u+1)$ $(u^6+4u^5+\cdots+4u+1)(u^{12}+7u^{11}+\cdots+8u+1)$ $(u^{30}+17u^{29}+\cdots-4u+1)$
c_3	$u(u^3-u^2-1)^2(u^6+2u^5+u^4+3u^3+2u^2+u+1)$ $(u^{12}+11u^{11}+\cdots+88u+8)$ $(-3+8u-11u^2+13u^3+4u^4-62u^5+78u^6+34u^7-169u^8+148u^9-9u^{10}-61u^{11}+31u$
c_4	$(u+1)(u^3+u+1)^2(u^6-u^5+2u^4-3u^3+u^2-2u+1)$ $(u^{12}+7u^{11}+\cdots-4u-8)$ $(-1+5u-9u^2+13u^3-13u^4+19u^5-21u^6+27u^7-26u^8+24u^9-20u^{10}+16u^{11}-11u^{1}$
c_6, c_9	$(u+1)(u^6-2u^4+2u^2-u-1)(u^6-2u^4+u^3+2u^2-1)$ $(u^{12}-u^{11}+\cdots+2u-1)(u^{30}+u^{29}+\cdots+2u^2+1)$
c_7	$(u+1)(u^3+u-1)^2(u^6+u^5+2u^4+3u^3+u^2+2u+1)$ $(u^{12}+7u^{11}+\cdots-4u-8)$ $(-1+5u-9u^2+13u^3-13u^4+19u^5-21u^6+27u^7-26u^8+24u^9-20u^{10}+16u^{11}-11u^{1}$
c_8, c_{11}	$(u-1)(u^6-3u^5+2u^4+u^3-3u^2+2u-1)$ $(u^6-u^5+\cdots+2u-1)(u^{12}+2u^{11}+\cdots-3u+1)$ $(u^{30}+2u^{29}+\cdots-66u-79)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_6	$(y-1)(y^6-4y^5+8y^4-11y^3+8y^2-4y+1)$ $(y^6-4y^5+\cdots-5y+1)(y^{12}-7y^{11}+\cdots-8y+1)$ $(y^{30}-17y^{29}+\cdots+4y+1)$
c_2	$(y-1)(y^6-10y^3-20y^2-9y+1)(y^6-8y^4-23y^3-8y^2+1)$ $(y^{12}+y^{11}+\cdots-32y+1)(y^{30}-5y^{29}+\cdots-112y+1)$
c_3	$y(y^3-y^2-2y-1)^2(y^6-2y^5-7y^4-7y^3+3y+1)$ $(y^{12}-7y^{11}+\cdots-1760y+64)(y^{30}-42y^{29}+\cdots+36y+81)$
c_4, c_7	$(y-1)(y^3+2y^2+y-1)^2(y^6+3y^5-7y^3-7y^2-2y+1)$ $(y^{12}+5y^{11}+\cdots-656y+64)$ $(-1+7y+23y^2+83y^3+165y^4+249y^5+311y^6+311y^7+240y^8+152y^9+86y^{10}+50y^{11}$
c_5, c_9	$(y-1)(y^6-4y^5+8y^4-11y^3+8y^2-4y+1)$ $(y^6-4y^5+\cdots-5y+1)(y^{12}-7y^{11}+\cdots-8y+1)$ $(y^{30}-17y^{29}+\cdots+4y+1)$
c_8, c_{11}	$(y-1)(y^6-5y^5+4y^4-3y^3+y^2+2y+1)$ $(y^6-3y^5+\cdots+2y+1)(y^{12}-18y^{11}+\cdots-21y+1)$ $(y^{30}-30y^{29}+\cdots-120802y+6241)$
c_{10}	$(y-1)(y^6-10y^3-20y^2-9y+1)(y^6-8y^4-23y^3-8y^2+1)$ $(y^{12}+y^{11}+\cdots-32y+1)(y^{30}-5y^{29}+\cdots-112y+1)$