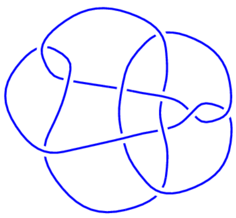
$11n_{126}$ ($K11n_{126}$)



[1]

Arc Sequences

$$\longrightarrow \underset{5}{\downarrow} \longrightarrow \underset{1}{\downarrow} \longrightarrow \underset{10}{\downarrow} \longrightarrow \underset{7}{\downarrow} \longrightarrow \underset{2}{\downarrow} \longrightarrow \underset{9}{\downarrow} \longrightarrow \underset{11}{\downarrow} \longrightarrow \underset{5}{\downarrow} \longrightarrow \underset{1}{\downarrow} \longrightarrow \underset{8}{\downarrow} \longrightarrow \underset{4}{\downarrow} \longrightarrow$$

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{8} I_i^u$$

$I_1^u = \langle u^2 + 2u + 2,\ b + u + 1,\ 2a - u - 2 \rangle$

$I_2^u = \langle u^4 + 3u^3 + 2u^2 - 1,\ a + 1,\ u^2 + b + u \rangle$

$I_3^u = \langle u^5 - 4u^4 + 3u^3 + 2u^2 + u - 1,\ a - 1,\ -u^2 + b + u \rangle$

$I_4^u = \langle u^6 - 4u^5 + u^4 + 9u^3 - 16u + 10,\ -8u^5 + 23u^4 + 14u^3 - 33u^2 + 31b - 41u + 47,$
$\quad 27u^5 - 128u^4 + 7u^3 + 433u^2 + 310a + 150u - 612 \rangle$

$I_5^u = \langle u^6 + 3u^5 - 3u^3 + 2u^2 + 1,\ a - 1,\ -u^5 - 4u^4 - 2u^3 + 3u^2 + 2b - u - 1 \rangle$

$I_6^u = \langle b^2 + 1,\ a + 1,\ u - 1 \rangle$

$I_7^u = \langle b^2 + 1,\ u - 1,\ -b + a - 1 \rangle$

$I_8^u = \langle u^6 + 3u^5 - 3u^3 + 2u^2 + 1,\ u^5 + 2u^4 - 2u^3 - u^2 + 2b + 3u - 1,\ -u^5 - 2u^4 + 4u^3 + 5u^2 + 2a - 7u + 1 \rangle$

There are 8 irreducible components with 33 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. $I_1^u = \langle u^2 + 2u + 2,\ b + u + 1,\ 2a - u - 2 \rangle$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 2u+3 \\ -2u-2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u \\ -u-4 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} \frac{1}{2}u+1 \\ -u-1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{1}{2}u \\ -u-3 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{3}{2}u+2 \\ -u-1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{1}{2}u+1 \\ -u-1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{2}u+1 \\ -1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u+1 \\ 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u+1 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000 - 1.00000I$ $a = 0.500000 - 0.500000I$ $b = 1.00000I$	1.64493	-8.00000
$u = -1.00000 + 1.00000I$ $a = 0.500000 + 0.500000I$ $b = -1.00000I$	1.64493	-8.00000

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -2.17872$ $a = -1.00000$ $b = -2.56811$	-13.8089	-12.1771
$u = -0.667076 - 0.670769I$ $a = -1.00000$ $b = 0.672017 - 0.224139I$	$3.04056 - 6.31855I$	$-7.20042 + 6.94067I$
$u = -0.667076 + 0.670769I$ $a = -1.00000$ $b = 0.672017 + 0.224139I$	$3.04056 + 6.31855I$	$-7.20042 - 6.94067I$
$u = 0.512876$ $a = -1.00000$ $b = -0.775919$	-2.14179	-18.4220

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

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I^u_3	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.456518 - 0.478939I$ $a = \quad 1.00000$ $b = \quad 0.435545 + 0.916228I$	$4.11394 - 0.50358I$	$-4.17139 + 2.42983I$
$u = -0.456518 + 0.478939I$ $a = \quad 1.00000$ $b = \quad 0.435545 - 0.916228I$	$4.11394 + 0.50358I$	$-4.17139 - 2.42983I$
$u = \quad 0.455088$ $a = \quad 1.00000$ $b = -0.247983$	-0.742760	-13.4344
$u = \quad 2.22897 - 0.22563I$ $a = \quad 1.00000$ $b = \quad 2.68845 - 0.78020I$	$-11.1448 + 10.7639I$	$-11.61144 - 5.00628I$
$u = \quad 2.22897 + 0.22563I$ $a = \quad 1.00000$ $b = \quad 2.68845 + 0.78020I$	$-11.1448 - 10.7639I$	$-11.61144 + 5.00628I$

IV. $I_4^u = \langle u^6 - 4u^5 + u^4 + 9u^3 - 16u + 10,\ -8u^5 + 23u^4 + \cdots + 31b + 47,\ 27u^5 - 128u^4 + \cdots + 310a - 612\rangle$

(i) Arc colorings

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

$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0870968u^5 + 0.412903u^4 + \cdots - 0.483871u + 1.97419 \\ 0.258065u^5 - 0.741935u^4 + \cdots + 1.32258u - 1.51613 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.164516u^5 + 0.335484u^4 + \cdots - 1.58065u + 0.729032 \\ -0.290323u^5 + 0.709677u^4 + \cdots - 0.612903u + 1.58065 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.345161u^5 + 1.15484u^4 + \cdots - 1.80645u + 3.49032 \\ 0.258065u^5 - 0.741935u^4 + \cdots + 1.32258u - 1.51613 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.0935484u^5 - 0.406452u^4 + \cdots + 0.741935u - 0.787097 \\ 0.322581u^5 - 0.677419u^4 + \cdots + 1.90323u - 1.64516 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0870968u^5 + 0.412903u^4 + \cdots - 0.483871u + 1.97419 \\ -0.0645161u^5 - 0.0645161u^4 + \cdots - 0.580645u - 0.870968 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{1}{10}u^5 + \frac{2}{5}u^4 + \cdots - \frac{9}{10}u^2 + \frac{8}{5} \\ 0.0322581u^5 + 0.0322581u^4 + \cdots - 0.709677u + 0.935484 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -\frac{1}{10}u^5 + \frac{2}{5}u^4 + \cdots - \frac{9}{10}u^2 + \frac{8}{5} \\ 0.0322581u^5 + 0.0322581u^4 + \cdots - 0.709677u + 0.935484 \end{pmatrix}$$

(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
$u = -1.221244 - 0.712792I$ $a = -0.093681 - 0.373158I$ $b = 0.709117 - 1.052541I$	$2.26485 - 4.47692I$	$-9.60193 + 3.00061I$
$u = -1.221244 + 0.712792I$ $a = -0.093681 + 0.373158I$ $b = 0.709117 + 1.052541I$	$2.26485 + 4.47692I$	$-9.60193 - 3.00061I$
$u = 0.912842 - 0.311096I$ $a = 0.588546 + 0.687760I$ $b = 0.072877 - 0.272459I$	$-0.389538 + 0.233200I$	$-13.01274 - 1.15455I$
$u = 0.912842 + 0.311096I$ $a = 0.588546 - 0.687760I$ $b = 0.072877 + 0.272459I$	$-0.389538 - 0.233200I$	$-13.01274 + 1.15455I$
$u = 2.30840 - 0.22043I$ $a = -0.894865 - 0.153901I$ $b = -2.78199 + 0.25607I$	$-13.38985 - 2.37783I$	$-11.38532 + 2.96944I$
$u = 2.30840 + 0.22043I$ $a = -0.894865 + 0.153901I$ $b = -2.78199 - 0.25607I$	$-13.38985 + 2.37783I$	$-11.38532 - 2.96944I$

V.

$$\boldsymbol{I^u_5 = \langle u^6 + 3u^5 - 3u^3 + 2u^2 + 1,\ a - 1,\ -u^5 - 4u^4 - 2u^3 + 3u^2 + 2b - u - 1\rangle}$$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_5^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -2.09963 - 0.15801I$ $a = 1.00000$ $b = 2.07508 + 0.88397I$	$-13.38985 - 2.37783I$	$-11.38532 + 2.96944I$
$u = -2.09963 + 0.15801I$ $a = 1.00000$ $b = 2.07508 - 0.88397I$	$-13.38985 + 2.37783I$	$-11.38532 - 2.96944I$
$u = -0.151576 - 0.522493I$ $a = 1.00000$ $b = 0.971221 - 0.554396I$	$2.26485 + 4.47692I$	$-9.60193 - 3.00061I$
$u = -0.151576 + 0.522493I$ $a = 1.00000$ $b = 0.971221 + 0.554396I$	$2.26485 - 4.47692I$	$-9.60193 + 3.00061I$
$u = 0.751209 - 0.444722I$ $a = 1.00000$ $b = -0.546305 - 0.979253I$	$-0.389538 - 0.233200I$	$-13.01274 + 1.15455I$
$u = 0.751209 + 0.444722I$ $a = 1.00000$ $b = -0.546305 + 0.979253I$	$-0.389538 + 0.233200I$	$-13.01274 - 1.15455I$

VI. $I_6^u = \langle b^2+1,\ a+1,\ u-1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_6^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -1.00000$ $b = \quad - 1.00000I$	1.64493	−8.00000
$u = 1.00000$ $a = -1.00000$ $b = \quad 1.00000I$	1.64493	−8.00000

VII. $I^u_7 = \langle b^2+1,\ u-1,\ -b+a-1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_7^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 1.00000 - 1.00000I$ $b = -1.00000I$	1.64493	−8.00000
$u = 1.00000$ $a = 1.00000 + 1.00000I$ $b = 1.00000I$	1.64493	−8.00000

VIII. $I^u_8 = \langle u^6+3u^5-3u^3+2u^2+1,\ u^5+2u^4-2u^3-u^2+2b+3u-1,\ -u^5-2u^4+4u^3+5u^2+2a-7u+1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_8^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-2.09963-0.15801I$ $a=-1.085384+0.186667I$ $b=-2.78199+0.25607I$	$-13.38985-2.37783I$	$-11.38532+2.96944I$
$u=-2.09963+0.15801I$ $a=-1.085384-0.186667I$ $b=-2.78199-0.25607I$	$-13.38985+2.37783I$	$-11.38532-2.96944I$
$u=-0.151576-0.522493I$ $a=-0.63288-2.52094I$ $b=\ \ 0.709117+1.052541I$	$2.26485+4.47692I$	$-9.60193-3.00061I$
$u=-0.151576+0.522493I$ $a=-0.63288+2.52094I$ $b=\ \ 0.709117-1.052541I$	$2.26485-4.47692I$	$-9.60193+3.00061I$
$u=\ \ 0.751209-0.444722I$ $a=\ \ 0.718265+0.839346I$ $b=\ \ 0.072877+0.272459I$	$-0.389538-0.233200I$	$-13.01274+1.15455I$
$u=\ \ 0.751209+0.444722I$ $a=\ \ 0.718265-0.839346I$ $b=\ \ 0.072877-0.272459I$	$-0.389538+0.233200I$	$-13.01274-1.15455I$

IX. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u-1)^4(u^2+2u+2)(u^4+3u^3+2u^2-1)(u^5+4u^4+\cdots+u+1)$ $(u^6-3u^5+3u^3+2u^2+1)^2(u^6+4u^5+u^4-9u^3+16u+10)$
c_2	$(u+1)^4(u^2+4)(u^4+5u^3+2u^2+4u+1)$ $(u^5+10u^4+27u^3+6u^2+5u+1)$ $(u^6+9u^5+22u^4+7u^3+4u^2-4u+1)^2$ $(u^6+14u^5+73u^4+189u^3+308u^2+256u+100)$
c_3, c_5, c_8	$(u+1)^4(u^2-2u+2)(u^4-3u^3+2u^2-1)(u^5+4u^4+\cdots+u+1)$ $(u^6-3u^5+3u^3+2u^2+1)^2(u^6+4u^5+u^4-9u^3+16u+10)$
c_4, c_7, c_{11}	$(u^2+1)^2(u^2-2u+2)(u^4-u^3+u^2+u-1)$ $(u^5+2u^4+4u^3+2u^2+2u-1)(u^6-u^5+2u^4-u^3+2u^2-2u+1)^2$ $(u^6+4u^5+7u^4+7u^3+6u^2+4u+2)$
c_6, c_9	$(u^2+1)^3(u^4-2u^3-2u^2+u+1)(u^5+6u^4+12u^3+9u^2+5u-2)$ $(u^6-4u^5+u^4+2u^3+13u^2+2u+1)^2$ $(u^6+5u^5+9u^4+7u^3+8u^2+12u+8)$
c_{10}	$(u^2+1)^2(u^2+2u+2)(u^4+u^3+u^2-u-1)$ $(u^5+2u^4+4u^3+2u^2+2u-1)(u^6-u^5+2u^4-u^3+2u^2-2u+1)^2$ $(u^6+4u^5+7u^4+7u^3+6u^2+4u+2)$

X. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_3, c_5 c_8	$(y-1)^4(y^2+4)(y^4-5y^3+2y^2-4y+1)$ $(y^5-10y^4+27y^3-6y^2+5y-1)$ $(y^6-14y^5+73y^4-189y^3+308y^2-256y+100)$ $(y^6-9y^5+22y^4-7y^3+4y^2+4y+1)^2$
c_2	$(y-1)^4(y+4)^2(y^4-21y^3-34y^2-12y+1)$ $(y^5-46y^4+619y^3+214y^2+13y-1)$ $(y^6-50y^5+653y^4+2279y^3+12696y^2-3936y+10000)$ $(y^6-37y^5+366y^4+201y^3+116y^2-8y+1)^2$
c_4, c_7, c_{10} c_{11}	$(y+1)^4(y^2+4)(y^4+y^3+\cdots-3y+1)(y^5+4y^4+\cdots+8y-1)$ $(y^6-2y^5+\cdots+8y+4)(1+4y^2+5y^3+6y^4+3y^5+y^6)^2$
c_6, c_9	$(y+1)^6(y^4-8y^3+\cdots-5y+1)(y^5-12y^4+\cdots+61y-4)$ $(y^6-14y^5+43y^4+40y^3+163y^2+22y+1)^2$ $(y^6-7y^5+27y^4-9y^3+40y^2-16y+64)$