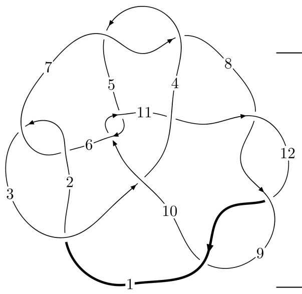
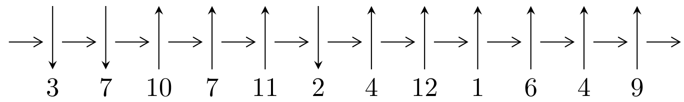
$12n_{0592}$ ($K12n_{0592}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -13u^{16} - 54u^{15} + \cdots + 4b - 36,\ -9u^{16} - 28u^{15} + \cdots + 8a + 20,\ u^{17} + 6u^{16} + \cdots + 56u + 8 \rangle$$

$$\begin{aligned} I_2^u = \langle & 3u^{10} - 8u^9 + 3u^8 + 16u^7 - 11u^6 - 21u^5 + 21u^4 + 16u^3 - 17u^2 + b - 6u + 6, \\ & 6u^{10} - 15u^9 + 4u^8 + 33u^7 - 20u^6 - 41u^5 + 39u^4 + 33u^3 - 32u^2 + a - 11u + 12, \\ & u^{11} - 3u^{10} + 2u^9 + 5u^8 - 6u^7 - 5u^6 + 10u^5 + 2u^4 - 8u^3 + u^2 + 3u - 1 \rangle \end{aligned}$$

$$I_3^u = \langle -37a^5u^2 + 123a^4u^2 + \cdots - 100a + 168,\ a^5u^2 - 3a^4u^2 + \cdots + 13a + 20,\ u^3 - u^2 + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 46 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. $I^u_1 = \langle -13u^{16} - 54u^{15} + \cdots + 4b - 36,\ -9u^{16} - 28u^{15} + \cdots + 8a + 20,\ u^{17} + 6u^{16} + \cdots + 56u + 8\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} \frac{9}{8}u^{16} + \frac{7}{2}u^{15} + \cdots - \frac{29}{2}u - \frac{5}{2} \\ \frac{13}{4}u^{16} + \frac{27}{2}u^{15} + \cdots + \frac{131}{2}u + 9 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{1}{4}u^{16} + u^{15} + \cdots + \frac{3}{2}u + \frac{1}{2} \\ \frac{1}{2}u^{16} + \frac{5}{2}u^{15} + \cdots + \frac{29}{2}u + 2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} \frac{33}{8}u^{16} + \frac{39}{2}u^{15} + \cdots + \frac{245}{2}u + \frac{39}{2} \\ \frac{25}{4}u^{16} + \frac{59}{2}u^{15} + \cdots + \frac{405}{2}u + 31 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{1}{4}u^{16} + u^{15} + \cdots + \frac{3}{2}u + \frac{1}{2} \\ -\frac{1}{2}u^{15} - 2u^{14} + \cdots - \frac{23}{2}u - 2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{9}{8}u^{16} - 4u^{15} + \cdots + 12u + \frac{9}{2} \\ -\frac{15}{4}u^{16} - \frac{29}{2}u^{15} + \cdots - \frac{29}{2}u + 1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} \frac{9}{4}u^{16} + 12u^{15} + \cdots + \frac{201}{2}u + \frac{35}{2} \\ 2u^{16} + \frac{25}{2}u^{15} + \cdots + \frac{311}{2}u + 26 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{11}{4}u^{16} - \frac{59}{4}u^{15} + \cdots - \frac{429}{4}u - 16 \\ -\frac{9}{4}u^{16} - 14u^{15} + \cdots - 141u - 22 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -9u^{16} - 52u^{15} - 116u^{14} - 68u^{13} + 190u^{12} + 347u^{11} - 140u^{10} - 1029u^9 - 1025u^8 + 472u^7 + 1947u^6 + 1504u^5 - 415u^4 - 1702u^3 - 1433u^2 - 576u - 82$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{17} + 6u^{16} + \cdots + 480u + 64$
c_2, c_6	$u^{17} - 6u^{16} + \cdots + 56u - 8$
c_3, c_5, c_{10}	$u^{17} - u^{15} + \cdots + 3u - 1$
c_4, c_7	$u^{17} + 4u^{16} + \cdots + 8u - 1$
c_8, c_9, c_{12}	$u^{17} - 7u^{16} + \cdots + 20u - 8$
c_{11}	$u^{17} - 2u^{16} + \cdots + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{17} + 22y^{16} + \cdots + 66048y - 4096$
c_2, c_6	$y^{17} - 6y^{16} + \cdots + 480y - 64$
c_3, c_5, c_{10}	$y^{17} - 2y^{16} + \cdots + 3y - 1$
c_4, c_7	$y^{17} - 36y^{16} + \cdots + 102y - 1$
c_8, c_9, c_{12}	$y^{17} - 21y^{16} + \cdots + 272y - 64$
c_{11}	$y^{17} - 44y^{16} + \cdots + 33y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.582631 + 0.962982I$ $a = -0.764828 + 0.649431I$ $b = 0.179778 + 1.114890I$	$6.08323 - 3.07842I$	$10.91849 + 3.36026I$
$u = -0.582631 - 0.962982I$ $a = -0.764828 - 0.649431I$ $b = 0.179778 - 1.114890I$	$6.08323 + 3.07842I$	$10.91849 - 3.36026I$
$u = -0.998116 + 0.574654I$ $a = -1.30029 + 0.75173I$ $b = -0.86585 + 1.49753I$	$-0.04390 + 4.58131I$	$7.64977 - 6.92778I$
$u = -0.998116 - 0.574654I$ $a = -1.30029 - 0.75173I$ $b = -0.86585 - 1.49753I$	$-0.04390 - 4.58131I$	$7.64977 + 6.92778I$
$u = 1.139290 + 0.263587I$ $a = 0.072389 + 0.255610I$ $b = -0.015097 - 0.310294I$	$-2.02646 - 1.69138I$	$0.73300 + 3.24851I$
$u = 1.139290 - 0.263587I$ $a = 0.072389 - 0.255610I$ $b = -0.015097 + 0.310294I$	$-2.02646 + 1.69138I$	$0.73300 - 3.24851I$
$u = -0.612038 + 0.494740I$ $a = 1.36351 - 0.44192I$ $b = 0.615883 - 0.945055I$	$1.133960 - 0.080801I$	$10.62347 + 1.71983I$
$u = -0.612038 - 0.494740I$ $a = 1.36351 + 0.44192I$ $b = 0.615883 + 0.945055I$	$1.133960 + 0.080801I$	$10.62347 - 1.71983I$
$u = -0.710496 + 1.098260I$ $a = 0.517258 - 0.878567I$ $b = -0.597387 - 1.192300I$	$16.3616 - 5.2854I$	$10.20532 + 2.53472I$
$u = -0.710496 - 1.098260I$ $a = 0.517258 + 0.878567I$ $b = -0.597387 + 1.192300I$	$16.3616 + 5.2854I$	$10.20532 - 2.53472I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.105090 + 0.729938I$ $a = 1.30956 - 0.56888I$ $b = 1.03194 - 1.58456I$	$4.45386 + 9.24930I$	$8.34005 - 7.37887I$
$u = -1.105090 - 0.729938I$ $a = 1.30956 + 0.56888I$ $b = 1.03194 + 1.58456I$	$4.45386 - 9.24930I$	$8.34005 + 7.37887I$
$u = -1.126030 + 0.831805I$ $a = -1.43522 + 0.37456I$ $b = -1.30455 + 1.61559I$	$14.9808 + 12.2193I$	$8.76311 - 5.87051I$
$u = -1.126030 - 0.831805I$ $a = -1.43522 - 0.37456I$ $b = -1.30455 - 1.61559I$	$14.9808 - 12.2193I$	$8.76311 + 5.87051I$
$u = 1.22314 + 0.77434I$ $a = -0.144243 - 0.159249I$ $b = 0.053117 + 0.306476I$	$4.66481 - 3.72406I$	$7.31637 - 0.66089I$
$u = 1.22314 - 0.77434I$ $a = -0.144243 + 0.159249I$ $b = 0.053117 - 0.306476I$	$4.66481 + 3.72406I$	$7.31637 + 0.66089I$
$u = -0.456042$ $a = 1.76372$ $b = 0.804333$	0.900511	10.9010

II.

$\boldsymbol{I_2^u = \langle 3u^{10}-8u^9+\cdots+b+6,\ 6u^{10}-15u^9+\cdots+a+12,\ u^{11}-3u^{10}+\cdots+3u-1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-6u^{10}+15u^9+\cdots+11u-12\\-3u^{10}+8u^9+\cdots+6u-6\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-3u^{10}+8u^9+\cdots+5u-9\\-u^{10}+3u^9-2u^8-5u^7+6u^6+5u^5-10u^4-2u^3+9u^2-u-3\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u^2+1\\-u^4\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-5u^{10}+13u^9+\cdots+8u-10\\-2u^{10}+6u^9-4u^8-9u^7+9u^6+12u^5-16u^4-8u^3+12u^2+3u-4\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-3u^{10}+8u^9+\cdots+5u-9\\-u^{10}+3u^9-2u^8-5u^7+6u^6+5u^5-10u^4-2u^3+8u^2-u-2\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-4u^{10}+10u^9+\cdots+7u-8\\-3u^{10}+8u^9+\cdots+6u-6\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}4u^{10}-10u^9+\cdots-4u+11\\3u^{10}-7u^9+u^8+16u^7-8u^6-19u^5+17u^4+14u^3-13u^2-3u+6\end{pmatrix}$$
$$a_8 = \begin{pmatrix}8u^{10}-21u^9+\cdots-13u+19\\3u^{10}-8u^9+\cdots-5u+9\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 7u^{10}-19u^9+13u^8+28u^7-27u^6-29u^5+51u^4+18u^3-28u^2+u+16$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{11} - 5u^{10} + \cdots + 11u - 1$
c_2	$u^{11} - 3u^{10} + 2u^9 + 5u^8 - 6u^7 - 5u^6 + 10u^5 + 2u^4 - 8u^3 + u^2 + 3u - 1$
c_3, c_{10}	$u^{11} + 4u^9 + u^8 + 4u^7 + 4u^6 - u^5 + 5u^4 - 2u^3 + 3u^2 - u + 1$
c_4	$u^{11} + 3u^9 + 6u^8 + u^7 + 20u^6 - 4u^5 + 26u^4 - 6u^3 + 15u^2 - 4u + 3$
c_5	$u^{11} + 4u^9 - u^8 + 4u^7 - 4u^6 - u^5 - 5u^4 - 2u^3 - 3u^2 - u - 1$
c_6	$u^{11} + 3u^{10} + 2u^9 - 5u^8 - 6u^7 + 5u^6 + 10u^5 - 2u^4 - 8u^3 - u^2 + 3u + 1$
c_7	$u^{11} + 3u^9 - 6u^8 + u^7 - 20u^6 - 4u^5 - 26u^4 - 6u^3 - 15u^2 - 4u - 3$
c_8, c_9	$u^{11} - 8u^9 - u^8 + 23u^7 + 5u^6 - 28u^5 - 7u^4 + 13u^3 + 2u^2 - 2u - 1$
c_{11}	$u^{11} + 7u^9 - 22u^8 + 7u^7 - 56u^6 - 3u^5 - 45u^4 - 6u^3 - 12u^2 - u - 1$
c_{12}	$u^{11} - 8u^9 + u^8 + 23u^7 - 5u^6 - 28u^5 + 7u^4 + 13u^3 - 2u^2 - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{11} + 19y^{10} + \cdots + 31y - 1$
c_2, c_6	$y^{11} - 5y^{10} + \cdots + 11y - 1$
c_3, c_5, c_{10}	$y^{11} + 8y^{10} + \cdots - 5y - 1$
c_4, c_7	$y^{11} + 6y^{10} + \cdots - 74y - 9$
c_8, c_9, c_{12}	$y^{11} - 16y^{10} + \cdots + 8y - 1$
c_{11}	$y^{11} + 14y^{10} + \cdots - 23y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.856562 + 0.586236I$ $a = -0.588949 + 0.335331I$ $b = 0.307889 - 0.632495I$	$2.23625 + 2.32410I$	$6.78884 - 2.44901I$
$u = -0.856562 - 0.586236I$ $a = -0.588949 - 0.335331I$ $b = 0.307889 + 0.632495I$	$2.23625 - 2.32410I$	$6.78884 + 2.44901I$
$u = -0.855558 + 0.209235I$ $a = 0.357696 - 0.809834I$ $b = -0.136583 + 0.767702I$	$-5.34223 + 0.90366I$	$2.99552 - 7.97302I$
$u = -0.855558 - 0.209235I$ $a = 0.357696 + 0.809834I$ $b = -0.136583 - 0.767702I$	$-5.34223 - 0.90366I$	$2.99552 + 7.97302I$
$u = 0.736045 + 0.353997I$ $a = 1.99508 - 0.41979I$ $b = 1.61707 + 0.39727I$	$0.857139 - 1.116710I$	$8.63274 + 6.10960I$
$u = 0.736045 - 0.353997I$ $a = 1.99508 + 0.41979I$ $b = 1.61707 - 0.39727I$	$0.857139 + 1.116710I$	$8.63274 - 6.10960I$
$u = 1.011880 + 0.753500I$ $a = -0.801625 + 0.134986I$ $b = -0.912860 - 0.467435I$	$-1.90477 - 3.17083I$	$-2.15194 + 8.40607I$
$u = 1.011880 - 0.753500I$ $a = -0.801625 - 0.134986I$ $b = -0.912860 + 0.467435I$	$-1.90477 + 3.17083I$	$-2.15194 - 8.40607I$
$u = 0.419548$ $a = -4.82997$ $b = -2.02640$	12.4935	13.9460
$u = 1.25442 + 1.05470I$ $a = 0.452785 - 0.066086I$ $b = 0.637684 + 0.394653I$	$4.48658 - 4.37367I$	$3.76171 + 10.00302I$

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.25442 - 1.05470I$		
$a =$	$0.452785 + 0.066086I$	$4.48658 + 4.37367I$	$3.76171 - 10.00302I$
$b =$	$0.637684 - 0.394653I$		

III. $\boldsymbol{I_3^u =}$
$\boldsymbol{\langle -37a^5u^2+123a^4u^2+\cdots-100a+168,\ a^5u^2-3a^4u^2+\cdots+13a+20,\ u^3-u^2+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} a \\ 0.110778a^5u^2 - 0.368263a^4u^2 + \cdots + 0.299401a - 0.502994 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.182635a^5u^2 - 0.323353a^4u^2 + \cdots - 0.371257a + 0.143713 \\ 0.365269a^5u^2 - 0.646707a^4u^2 + \cdots - 0.742515a + 0.287425 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^2 + u + 1 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 0.434132a^5u^2 + 0.0838323a^4u^2 + \cdots - 0.718563a - 0.592814 \\ 0.544910a^5u^2 - 0.284431a^4u^2 + \cdots - 1.41916a - 1.09581 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.182635a^5u^2 - 0.323353a^4u^2 + \cdots - 0.371257a + 0.143713 \\ 0.703593a^5u^2 - 1.12275a^4u^2 + \cdots - 0.733533a + 0.832335 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.799401a^5u^2 - 0.0628743a^4u^2 + \cdots - 0.461078a - 0.305389 \\ 0.868263a^5u^2 + 0.167665a^4u^2 + \cdots - 1.43713a - 1.18563 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.00898a^5u^2 + 1.55689a^4u^2 + \cdots + 0.583832a - 0.580838 \\ -0.853293a^5u^2 + 1.40419a^4u^2 + \cdots + 0.964072a - 0.179641 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.407186a^5u^2 + 1.24551a^4u^2 + \cdots + 0.467066a - 0.664671 \\ -0.736527a^5u^2 + 1.66467a^4u^2 + \cdots + 0.874251a - 0.628743 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^3+u^2+2u+1)^6$
c_2, c_6	$(u^3+u^2-1)^6$
c_3, c_5, c_{10}	$u^{18}+u^{17}+\cdots+4u-8$
c_4, c_7	$u^{18}+u^{17}+\cdots-684u-216$
c_8, c_9, c_{12}	$(u^3+u^2-2u-1)^6$
c_{11}	$u^{18}-u^{17}+\cdots-196u-392$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^3 + 3y^2 + 2y - 1)^6$
c_2, c_6	$(y^3 - y^2 + 2y - 1)^6$
c_3, c_5, c_{10}	$y^{18} + 3y^{17} + \cdots - 80y + 64$
c_4, c_7	$y^{18} - 21y^{17} + \cdots + 55728y + 46656$
c_8, c_9, c_{12}	$(y^3 - 5y^2 + 6y - 1)^6$
c_{11}	$y^{18} - 33y^{17} + \cdots - 16464y + 153664$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.877439 + 0.744862I$ $a = 0.961970 - 0.199906I$ $b = 0.842708 + 0.290892I$	$-1.20570 - 2.82812I$	$9.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = -0.641730 - 0.729183I$ $b = -0.62835 - 2.13101I$	$15.7136 - 2.8281I$	$9.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = -0.721738 + 0.281163I$ $b = -0.992973 - 0.541129I$	$-1.20570 - 2.82812I$	$9.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = -1.189520 - 0.508099I$ $b = -0.244232 - 0.630700I$	$4.43407 - 2.82812I$	$9.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = 0.516399 + 0.280423I$ $b = 0.66526 + 1.33185I$	$4.43407 - 2.82812I$	$9.50976 + 2.97945I$
$u = 0.877439 + 0.744862I$ $a = 1.61441 + 1.05819I$ $b = 0.019938 + 1.117810I$	$15.7136 - 2.8281I$	$9.50976 + 2.97945I$
$u = 0.877439 - 0.744862I$ $a = 0.961970 + 0.199906I$ $b = 0.842708 - 0.290892I$	$-1.20570 + 2.82812I$	$9.50976 - 2.97945I$
$u = 0.877439 - 0.744862I$ $a = -0.641730 + 0.729183I$ $b = -0.62835 + 2.13101I$	$15.7136 + 2.8281I$	$9.50976 - 2.97945I$
$u = 0.877439 - 0.744862I$ $a = -0.721738 - 0.281163I$ $b = -0.992973 + 0.541129I$	$-1.20570 + 2.82812I$	$9.50976 - 2.97945I$
$u = 0.877439 - 0.744862I$ $a = -1.189520 + 0.508099I$ $b = -0.244232 + 0.630700I$	$4.43407 + 2.82812I$	$9.50976 - 2.97945I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.877439 - 0.744862I$ $a = 0.516399 - 0.280423I$ $b = 0.66526 - 1.33185I$	$4.43407 + 2.82812I$	$9.50976 - 2.97945I$
$u = 0.877439 - 0.744862I$ $a = 1.61441 - 1.05819I$ $b = 0.019938 - 1.117810I$	$15.7136 + 2.8281I$	$9.50976 - 2.97945I$
$u = -0.754878$ $a = -0.685274 + 1.096670I$ $b = -0.517298 - 0.827854I$	-5.34329	2.98050
$u = -0.754878$ $a = -0.685274 - 1.096670I$ $b = -0.517298 + 0.827854I$	-5.34329	2.98050
$u = -0.754878$ $a = -1.95258$ $b = -2.71504$	11.5760	2.98050
$u = -0.754878$ $a = 1.92010 + 0.60556I$ $b = 1.44944 - 0.45713I$	0.296489	2.98050
$u = -0.754878$ $a = 1.92010 - 0.60556I$ $b = 1.44944 + 0.45713I$	0.296489	2.98050
$u = -0.754878$ $a = -3.59666$ $b = -1.47396$	11.5760	2.98050

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^3+u^2+2u+1)^6)(u^{11}-5u^{10}+\cdots+11u-1)$ $\cdot(u^{17}+6u^{16}+\cdots+480u+64)$
c_2	$(u^3+u^2-1)^6$ $\cdot(u^{11}-3u^{10}+2u^9+5u^8-6u^7-5u^6+10u^5+2u^4-8u^3+u^2+3u-1)$ $\cdot(u^{17}-6u^{16}+\cdots+56u-8)$
c_3, c_{10}	$(u^{11}+4u^9+u^8+4u^7+4u^6-u^5+5u^4-2u^3+3u^2-u+1)$ $\cdot(u^{17}-u^{15}+\cdots+3u-1)(u^{18}+u^{17}+\cdots+4u-8)$
c_4	$(u^{11}+3u^9+6u^8+u^7+20u^6-4u^5+26u^4-6u^3+15u^2-4u+3)$ $\cdot(u^{17}+4u^{16}+\cdots+8u-1)(u^{18}+u^{17}+\cdots-684u-216)$
c_5	$(u^{11}+4u^9-u^8+4u^7-4u^6-u^5-5u^4-2u^3-3u^2-u-1)$ $\cdot(u^{17}-u^{15}+\cdots+3u-1)(u^{18}+u^{17}+\cdots+4u-8)$
c_6	$(u^3+u^2-1)^6$ $\cdot(u^{11}+3u^{10}+2u^9-5u^8-6u^7+5u^6+10u^5-2u^4-8u^3-u^2+3u+1)$ $\cdot(u^{17}-6u^{16}+\cdots+56u-8)$
c_7	$(u^{11}+3u^9-6u^8+u^7-20u^6-4u^5-26u^4-6u^3-15u^2-4u-3)$ $\cdot(u^{17}+4u^{16}+\cdots+8u-1)(u^{18}+u^{17}+\cdots-684u-216)$
c_8, c_9	$(u^3+u^2-2u-1)^6$ $\cdot(u^{11}-8u^9-u^8+23u^7+5u^6-28u^5-7u^4+13u^3+2u^2-2u-1)$ $\cdot(u^{17}-7u^{16}+\cdots+20u-8)$
c_{11}	$(u^{11}+7u^9-22u^8+7u^7-56u^6-3u^5-45u^4-6u^3-12u^2-u-1)$ $\cdot(u^{17}-2u^{16}+\cdots+u-1)(u^{18}-u^{17}+\cdots-196u-392)$
c_{12}	$(u^3+u^2-2u-1)^6$ $\cdot(u^{11}-8u^9+u^8+23u^7-5u^6-28u^5+7u^4+13u^3-2u^2-2u+1)$ $\cdot(u^{17}-7u^{16}+\cdots+20u-8)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^3+3y^2+2y-1)^6)(y^{11}+19y^{10}+\cdots+31y-1)$ $\cdot(y^{17}+22y^{16}+\cdots+66048y-4096)$
c_2, c_6	$((y^3-y^2+2y-1)^6)(y^{11}-5y^{10}+\cdots+11y-1)$ $\cdot(y^{17}-6y^{16}+\cdots+480y-64)$
c_3, c_5, c_{10}	$(y^{11}+8y^{10}+\cdots-5y-1)(y^{17}-2y^{16}+\cdots+3y-1)$ $\cdot(y^{18}+3y^{17}+\cdots-80y+64)$
c_4, c_7	$(y^{11}+6y^{10}+\cdots-74y-9)(y^{17}-36y^{16}+\cdots+102y-1)$ $\cdot(y^{18}-21y^{17}+\cdots+55728y+46656)$
c_8, c_9, c_{12}	$((y^3-5y^2+6y-1)^6)(y^{11}-16y^{10}+\cdots+8y-1)$ $\cdot(y^{17}-21y^{16}+\cdots+272y-64)$
c_{11}	$(y^{11}+14y^{10}+\cdots-23y-1)(y^{17}-44y^{16}+\cdots+33y-1)$ $\cdot(y^{18}-33y^{17}+\cdots-16464y+153664)$