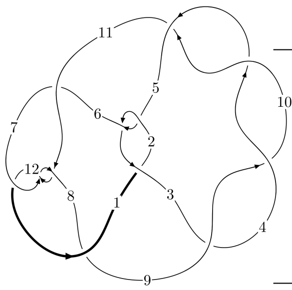
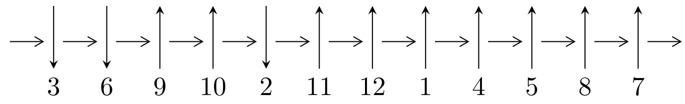
$12a_{0370}$ ($K12a_{0370}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 1.57162 \times 10^{65} u^{64} + 6.57175 \times 10^{65} u^{63} + \cdots + 2.92397 \times 10^{65} b - 2.95547 \times 10^{66},$$
$$1.26210 \times 10^{66} u^{64} + 4.50966 \times 10^{66} u^{63} + \cdots + 4.09356 \times 10^{66} a - 1.01879 \times 10^{67},\ u^{65} + 4u^{64} + \cdots - 51u +$$
$$I_2^u = \langle b,\ a^3 + a^2 - 1,\ u + 1 \rangle$$
$$I_3^u = \langle b^2 - 2,\ a^3 - a^2 + 1,\ u - 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 74 representations.

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[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. $\boldsymbol{I_1^u =}$
$\boldsymbol{\langle 1.57\times 10^{65}u^{64}+6.57\times 10^{65}u^{63}+\cdots+2.92\times 10^{65}b-2.96\times 10^{66},\ 1.26\times 10^{66}u^{64}+ 4.51\times 10^{66}u^{63}+\cdots+4.09\times 10^{66}a-1.02\times 10^{67},\ u^{65}+4u^{64}+\cdots-51u+7\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.308313u^{64}-1.10165u^{63}+\cdots-26.1352u+2.48875\\-0.537494u^{64}-2.24754u^{63}+\cdots-43.5603u+10.1077\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.845807u^{64}-3.34919u^{63}+\cdots-69.6955u+12.5965\\-0.537494u^{64}-2.24754u^{63}+\cdots-43.5603u+10.1077\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.896834u^{64}-4.06581u^{63}+\cdots-104.086u+24.6201\\-0.334251u^{64}-1.33325u^{63}+\cdots-27.2815u+5.97496\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u^3\\u^5-u^3+u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.938529u^{64}+4.21121u^{63}+\cdots+83.4299u-19.2445\\0.427727u^{64}+1.79587u^{63}+\cdots+45.3628u-9.76939\end{pmatrix}$$
$$a_9 = \begin{pmatrix}1.57556u^{64}+6.38013u^{63}+\cdots+112.041u-27.9236\\0.190879u^{64}+1.27293u^{63}+\cdots+6.17774u-2.70329\end{pmatrix}$$
$$a_8 = \begin{pmatrix}1.20468u^{64}+5.47814u^{63}+\cdots+111.316u-28.2011\\0.371889u^{64}+1.74141u^{63}+\cdots+25.4181u-6.03071\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-0.221510u^{64}-0.993540u^{63}+\cdots-40.1704u+6.43709\\-0.326133u^{64}-1.36825u^{63}+\cdots-16.1337u+4.29430\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.860917u^{64}+3.71890u^{63}+\cdots+8.19845u+13.2317$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{65} + 28u^{64} + \cdots + 1621u + 49$
c_2, c_5	$u^{65} + 4u^{64} + \cdots - 51u + 7$
c_3, c_4, c_9 c_{10}	$u^{65} - u^{64} + \cdots - 8u - 8$
c_6, c_8	$u^{65} + 2u^{64} + \cdots + 2788u + 289$
c_7, c_{11}, c_{12}	$u^{65} - 2u^{64} + \cdots + 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{65} + 28y^{64} + \cdots + 644709y - 2401$
c_2, c_5	$y^{65} - 28y^{64} + \cdots + 1621y - 49$
c_3, c_4, c_9 c_{10}	$y^{65} - 79y^{64} + \cdots + 1728y - 64$
c_6, c_8	$y^{65} - 50y^{64} + \cdots + 7602434y - 83521$
c_7, c_{11}, c_{12}	$y^{65} + 54y^{64} + \cdots + 98y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.612176 + 0.789701I$ $a = 0.561126 + 0.096922I$ $b = -0.952670 - 0.404352I$	$6.34514 + 1.30632I$	$13.77211 - 1.31410I$
$u = 0.612176 - 0.789701I$ $a = 0.561126 - 0.096922I$ $b = -0.952670 + 0.404352I$	$6.34514 - 1.30632I$	$13.77211 + 1.31410I$
$u = -0.747787 + 0.667407I$ $a = -0.360811 + 0.449280I$ $b = -0.034903 + 0.726729I$	$-0.65467 - 1.56191I$	$6.00000 + 0.I$
$u = -0.747787 - 0.667407I$ $a = -0.360811 - 0.449280I$ $b = -0.034903 - 0.726729I$	$-0.65467 + 1.56191I$	$6.00000 + 0.I$
$u = 0.537868 + 0.834733I$ $a = -0.578993 - 0.033369I$ $b = 0.891890 + 0.462986I$	$2.20984 + 5.53743I$	$9.36866 - 4.50579I$
$u = 0.537868 - 0.834733I$ $a = -0.578993 + 0.033369I$ $b = 0.891890 - 0.462986I$	$2.20984 - 5.53743I$	$9.36866 + 4.50579I$
$u = 0.879407 + 0.497658I$ $a = 1.025300 + 0.888790I$ $b = -0.712730 + 0.316213I$	$0.21641 - 3.44473I$	$7.87016 + 8.48336I$
$u = 0.879407 - 0.497658I$ $a = 1.025300 - 0.888790I$ $b = -0.712730 - 0.316213I$	$0.21641 + 3.44473I$	$7.87016 - 8.48336I$
$u = 0.698155 + 0.733599I$ $a = -0.513257 - 0.173198I$ $b = 1.036060 + 0.336652I$	$2.63490 - 2.89952I$	$9.88169 + 2.65135I$
$u = 0.698155 - 0.733599I$ $a = -0.513257 + 0.173198I$ $b = 1.036060 - 0.336652I$	$2.63490 + 2.89952I$	$9.88169 - 2.65135I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.04736$ $a = -0.0308709$ $b = 1.43162$	3.32536	1.90800
$u = -0.688518 + 0.611372I$ $a = -2.95116 + 0.90249I$ $b = 1.56873 + 0.00323I$	$2.81749 - 1.96826I$	$8.01195 + 0.26172I$
$u = -0.688518 - 0.611372I$ $a = -2.95116 - 0.90249I$ $b = 1.56873 - 0.00323I$	$2.81749 + 1.96826I$	$8.01195 - 0.26172I$
$u = -0.859363 + 0.654709I$ $a = 0.345067 - 0.440186I$ $b = 0.113262 - 0.740531I$	$2.97311 + 2.54501I$	0
$u = -0.859363 - 0.654709I$ $a = 0.345067 + 0.440186I$ $b = 0.113262 + 0.740531I$	$2.97311 - 2.54501I$	0
$u = -0.792220 + 0.742732I$ $a = 2.28438 - 0.98600I$ $b = -1.61762 - 0.02352I$	$8.72128 + 0.76781I$	0
$u = -0.792220 - 0.742732I$ $a = 2.28438 + 0.98600I$ $b = -1.61762 + 0.02352I$	$8.72128 - 0.76781I$	0
$u = -0.879226 + 0.208718I$ $a = -0.212799 + 0.396317I$ $b = -0.139382 + 0.414404I$	$-1.47345 + 0.81303I$	$-1.06179 - 2.21079I$
$u = -0.879226 - 0.208718I$ $a = -0.212799 - 0.396317I$ $b = -0.139382 - 0.414404I$	$-1.47345 - 0.81303I$	$-1.06179 + 2.21079I$
$u = 1.018090 + 0.446326I$ $a = -1.00410 - 1.10254I$ $b = 0.594982 - 0.430810I$	$-5.61394 - 4.98473I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.018090 - 0.446326I$ $a = -1.00410 + 1.10254I$ $b = \ \ 0.594982 + 0.430810I$	$-5.61394 + 4.98473I$	0
$u = -1.090720 + 0.327345I$ $a = \ \ 0.346639 - 0.382185I$ $b = \ \ 0.354858 - 0.503499I$	$-6.33395 + 1.70228I$	0
$u = -1.090720 - 0.327345I$ $a = \ \ 0.346639 + 0.382185I$ $b = \ \ 0.354858 + 0.503499I$	$-6.33395 - 1.70228I$	0
$u = \ \ 0.835134 + 0.207071I$ $a = \ \ 1.74135 + 0.81734I$ $b = -0.458541 + 0.146079I$	$-4.20314 + 2.29651I$	$7.92045 + 3.19787I$
$u = \ \ 0.835134 - 0.207071I$ $a = \ \ 1.74135 - 0.81734I$ $b = -0.458541 - 0.146079I$	$-4.20314 - 2.29651I$	$7.92045 - 3.19787I$
$u = -0.942425 + 0.650639I$ $a = -0.339182 + 0.434920I$ $b = -0.173665 + 0.754967I$	$-1.25054 + 6.68721I$	0
$u = -0.942425 - 0.650639I$ $a = -0.339182 - 0.434920I$ $b = -0.173665 - 0.754967I$	$-1.25054 - 6.68721I$	0
$u = -0.477249 + 1.048800I$ $a = \ \ 1.83392 - 0.00459I$ $b = -1.66803 + 0.12607I$	$11.03680 - 7.80758I$	0
$u = -0.477249 - 1.048800I$ $a = \ \ 1.83392 + 0.00459I$ $b = -1.66803 - 0.12607I$	$11.03680 + 7.80758I$	0
$u = \ \ 1.121100 + 0.284148I$ $a = \ \ 0.127434 + 0.111845I$ $b = -1.44392 - 0.12372I$	$-0.503562 + 0.442865I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.121100 - 0.284148I$ $a = \quad 0.127434 - 0.111845I$ $b = -1.44392 + 0.12372I$	$-0.503562 - 0.442865I$	0
$u = -0.542642 + 1.041680I$ $a = -1.84192 + 0.12408I$ $b = \quad 1.67890 - 0.10309I$	$15.4602 - 3.2500I$	0
$u = -0.542642 - 1.041680I$ $a = -1.84192 - 0.12408I$ $b = \quad 1.67890 + 0.10309I$	$15.4602 + 3.2500I$	0
$u = -1.000100 + 0.618281I$ $a = \quad 1.89737 - 1.82085I$ $b = -1.58542 - 0.10501I$	$1.82316 + 6.85461I$	0
$u = -1.000100 - 0.618281I$ $a = \quad 1.89737 + 1.82085I$ $b = -1.58542 + 0.10501I$	$1.82316 - 6.85461I$	0
$u = -0.929923 + 0.728312I$ $a = -1.97076 + 1.33085I$ $b = \quad 1.62385 + 0.07311I$	$8.30513 + 4.82290I$	0
$u = -0.929923 - 0.728312I$ $a = -1.97076 - 1.33085I$ $b = \quad 1.62385 - 0.07311I$	$8.30513 - 4.82290I$	0
$u = \quad 0.716718 + 0.381500I$ $a = -1.220570 - 0.577631I$ $b = \quad 0.643611 - 0.098429I$	$0.785742 - 0.346166I$	$11.27090 + 0.19465I$
$u = \quad 0.716718 - 0.381500I$ $a = -1.220570 + 0.577631I$ $b = \quad 0.643611 + 0.098429I$	$0.785742 + 0.346166I$	$11.27090 - 0.19465I$
$u = -0.616760 + 1.016660I$ $a = \quad 1.86366 - 0.26965I$ $b = -1.68444 + 0.07351I$	$12.05520 + 1.42142I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.616760 - 1.016660I$ $a = 1.86366 + 0.26965I$ $b = -1.68444 - 0.07351I$	$12.05520 - 1.42142I$	0
$u = 0.965461 + 0.702359I$ $a = 0.835684 + 0.911173I$ $b = -0.858855 + 0.509945I$	$1.85518 - 2.58936I$	0
$u = 0.965461 - 0.702359I$ $a = 0.835684 - 0.911173I$ $b = -0.858855 - 0.509945I$	$1.85518 + 2.58936I$	0
$u = -1.19939$ $a = 0.542136$ $b = 0.558137$	0.215305	0
$u = -1.223990 + 0.070272I$ $a = -0.568813 + 0.167355I$ $b = -0.598816 + 0.153922I$	$-3.79500 - 3.51729I$	0
$u = -1.223990 - 0.070272I$ $a = -0.568813 - 0.167355I$ $b = -0.598816 - 0.153922I$	$-3.79500 + 3.51729I$	0
$u = 1.036490 + 0.697733I$ $a = -0.809759 - 0.942093I$ $b = 0.818309 - 0.567364I$	$5.09312 - 6.92778I$	0
$u = 1.036490 - 0.697733I$ $a = -0.809759 + 0.942093I$ $b = 0.818309 + 0.567364I$	$5.09312 + 6.92778I$	0
$u = 1.084460 + 0.684896I$ $a = 0.789764 + 0.966569I$ $b = -0.784743 + 0.601883I$	$0.58292 - 11.22380I$	0
$u = 1.084460 - 0.684896I$ $a = 0.789764 - 0.966569I$ $b = -0.784743 - 0.601883I$	$0.58292 + 11.22380I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.113940+0.786858I$ $a=-1.41064+1.35680I$ $b=\ \ 1.66142+0.14314I$	$10.51140+5.10195I$	0
$u=-1.113940-0.786858I$ $a=-1.41064-1.35680I$ $b=\ \ 1.66142-0.14314I$	$10.51140-5.10195I$	0
$u=-1.163830+0.759847I$ $a=\ \ 1.29115-1.43417I$ $b=-1.65344-0.16744I$	$13.5310+9.7563I$	0
$u=-1.163830-0.759847I$ $a=\ \ 1.29115+1.43417I$ $b=-1.65344+0.16744I$	$13.5310-9.7563I$	0
$u=-1.192080+0.730572I$ $a=-1.21566+1.50565I$ $b=\ \ 1.64210+0.18253I$	$8.8189+14.2263I$	0
$u=-1.192080-0.730572I$ $a=-1.21566-1.50565I$ $b=\ \ 1.64210-0.18253I$	$8.8189-14.2263I$	0
$u=\ \ 1.42411$ $a=\ \ 0.159460$ $b=-1.60305$	7.84976	0
$u=\ \ 1.42552+0.07021I$ $a=-0.161047-0.012113I$ $b=\ \ 1.60335+0.03552I$	$3.90623+4.17049I$	0
$u=\ \ 1.42552-0.07021I$ $a=-0.161047+0.012113I$ $b=\ \ 1.60335-0.03552I$	$3.90623-4.17049I$	0
$u=\ \ 0.012164+0.540343I$ $a=\ \ 0.787036-0.425151I$ $b=-0.383178-0.436316I$	$-3.21514+1.52290I$	$5.38087-4.43310I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.012164 - 0.540343I$ $a = 0.787036 + 0.425151I$ $b = -0.383178 + 0.436316I$	$-3.21514 - 1.52290I$	$5.38087 + 4.43310I$
$u = 0.377484 + 0.366802I$ $a = 0.07583 - 1.59486I$ $b = 1.322440 - 0.065855I$	$2.05865 - 3.23471I$	$10.89405 + 4.40187I$
$u = 0.377484 - 0.366802I$ $a = 0.07583 + 1.59486I$ $b = 1.322440 + 0.065855I$	$2.05865 + 3.23471I$	$10.89405 - 4.40187I$
$u = 0.348475$ $a = -2.14252$ $b = -1.35387$	5.84839	16.9730
$u = 0.260517$ $a = -1.67780$ $b = 0.360345$	0.625974	16.0870

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

(i) Arc colorings

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

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

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

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

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

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

$$a_7 = \begin{pmatrix} a^2 + 1 \\ 1 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} a \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 2a \\ a \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 2a^2 + a - 2 \\ a^2 - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2a^2 + 2a + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^3$
c_3, c_4, c_9 c_{10}	u^3
c_5	$(u+1)^3$
c_6, c_8	$u^3 - u^2 + 1$
c_7	$u^3 + u^2 + 2u + 1$
c_{11}, c_{12}	$u^3 - u^2 + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^3$
c_3, c_4, c_9 c_{10}	y^3
c_6, c_8	$y^3 - y^2 + 2y - 1$
c_7, c_{11}, c_{12}	$y^3 + 3y^2 + 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00000$ $a=-0.877439+0.744862I$ $b=0$	$-4.66906-2.82812I$	$-0.18504+4.10401I$
$u=-1.00000$ $a=-0.877439-0.744862I$ $b=0$	$-4.66906+2.82812I$	$-0.18504-4.10401I$
$u=-1.00000$ $a=0.754878$ $b=0$	-0.531480	2.37010

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} a \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} b + a \\ b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} ba + a^2 + 1 \\ ba + 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} ba + 1 \\ 2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -b - a \\ -b \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -b - 2a \\ -b - a \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -a^2b - 2a^2 + b + a + 2 \\ -a^2b - a^2 + b + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4a + 8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5	$(y-1)^6$
c_3, c_4, c_9 c_{10}	$(y-2)^6$
c_6, c_8	$(y^3-y^2+2y-1)^2$
c_7, c_{11}, c_{12}	$(y^3+3y^2+2y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 0.877439 + 0.744862I$ $b = 1.41421$	$0.26574 + 2.82812I$	$4.49024 - 2.97945I$
$u = 1.00000$ $a = 0.877439 + 0.744862I$ $b = -1.41421$	$0.26574 + 2.82812I$	$4.49024 - 2.97945I$
$u = 1.00000$ $a = 0.877439 - 0.744862I$ $b = 1.41421$	$0.26574 - 2.82812I$	$4.49024 + 2.97945I$
$u = 1.00000$ $a = 0.877439 - 0.744862I$ $b = -1.41421$	$0.26574 - 2.82812I$	$4.49024 + 2.97945I$
$u = 1.00000$ $a = -0.754878$ $b = 1.41421$	4.40332	11.0200
$u = 1.00000$ $a = -0.754878$ $b = -1.41421$	4.40332	11.0200

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{65}+28u^{64}+\cdots+1621u+49)$
c_2	$((u-1)^3)(u+1)^6(u^{65}+4u^{64}+\cdots-51u+7)$
c_3, c_4, c_9 c_{10}	$u^3(u^2-2)^3(u^{65}-u^{64}+\cdots-8u-8)$
c_5	$((u-1)^6)(u+1)^3(u^{65}+4u^{64}+\cdots-51u+7)$
c_6, c_8	$(u^3-u^2+1)(u^3+u^2-1)^2(u^{65}+2u^{64}+\cdots+2788u+289)$
c_7	$((u^3-u^2+2u-1)^2)(u^3+u^2+2u+1)(u^{65}-2u^{64}+\cdots+8u+1)$
c_{11}, c_{12}	$(u^3-u^2+2u-1)(u^3+u^2+2u+1)^2(u^{65}-2u^{64}+\cdots+8u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{65}+28y^{64}+\cdots+644709y-2401)$
c_2, c_5	$((y-1)^9)(y^{65}-28y^{64}+\cdots+1621y-49)$
c_3, c_4, c_9 c_{10}	$y^3(y-2)^6(y^{65}-79y^{64}+\cdots+1728y-64)$
c_6, c_8	$((y^3-y^2+2y-1)^3)(y^{65}-50y^{64}+\cdots+7602434y-83521)$
c_7, c_{11}, c_{12}	$((y^3+3y^2+2y-1)^3)(y^{65}+54y^{64}+\cdots+98y-1)$