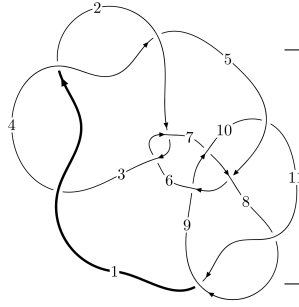
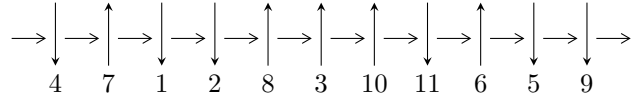


11a₂₅₄ (K11a₂₅₄)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -6.04159 \times 10^{241} u^{70} + 7.02943 \times 10^{242} u^{69} + \dots + 6.12381 \times 10^{241} b + 8.22545 \times 10^{241}, \\ 2.08888 \times 10^{242} u^{70} - 2.32560 \times 10^{243} u^{69} + \dots + 6.12381 \times 10^{241} a + 2.43849 \times 10^{242}, u^{71} - 12u^{70} + \dots - 2u \rangle$$

$$I_2^u = \langle b, -u^5 + 2u^4 + u^3 - 3u^2 + a + 2, u^6 - u^5 - u^4 + 2u^3 - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 77 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } I_1^u = \langle -6.04 \times 10^{241} u^{70} + 7.03 \times 10^{242} u^{69} + \dots + 6.12 \times 10^{241} b + 8.23 \times 10^{241}, 2.09 \times 10^{242} u^{70} - 2.33 \times 10^{243} u^{69} + \dots + 6.12 \times 10^{241} a + 2.44 \times 10^{242}, u^{71} - 12u^{70} + \dots - 2u + 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_7 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_3 &= \begin{pmatrix} -3.41108u^{70} + 37.9764u^{69} + \dots - 4.41767u - 3.98199 \\ 0.986573u^{70} - 11.4788u^{69} + \dots + 1.16296u - 1.34319 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -4.39765u^{70} + 49.4552u^{69} + \dots - 5.58062u - 2.63880 \\ 0.986573u^{70} - 11.4788u^{69} + \dots + 1.16296u - 1.34319 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.676294u^{70} - 8.31654u^{69} + \dots + 9.11289u - 1.31962 \\ 0.0427928u^{70} - 0.0844798u^{69} + \dots + 0.876884u + 1.75188 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 1.00267u^{70} - 12.5483u^{69} + \dots + 9.31432u - 3.27251 \\ 0.304306u^{70} - 3.13984u^{69} + \dots + 1.83385u + 1.43659 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -1.46583u^{70} + 16.5432u^{69} + \dots - 16.5616u + 9.43161 \\ 0.491717u^{70} - 5.73898u^{69} + \dots + 1.64593u - 1.66950 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 3.16529u^{70} - 35.6825u^{69} + \dots + 7.81990u + 2.97070 \\ -0.426948u^{70} + 5.06894u^{69} + \dots + 0.0537692u + 1.02327 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -2.10032u^{70} + 24.1805u^{69} + \dots - 0.598859u + 2.20095 \\ 0.426948u^{70} - 5.06894u^{69} + \dots - 0.0537692u - 1.02327 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -0.0796172u^{70} + 0.485804u^{69} + \dots - 16.3067u + 8.04204 \\ 0.110458u^{70} - 1.25495u^{69} + \dots + 2.09635u - 1.23648 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -0.0796172u^{70} + 0.485804u^{69} + \dots - 16.3067u + 8.04204 \\ 0.110458u^{70} - 1.25495u^{69} + \dots + 2.09635u - 1.23648 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-4.95513u^{70} + 59.1718u^{69} + \dots - 20.0129u + 21.2017$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4	$u^{71} - 7u^{70} + \dots - 3u + 1$
c_2, c_6	$u^{71} - u^{70} + \dots + 320u + 64$
c_5	$u^{71} + 6u^{70} + \dots + 2u + 1$
c_7	$u^{71} + 12u^{70} + \dots - 2u - 1$
c_8, c_{11}	$u^{71} - 2u^{70} + \dots + 10u + 1$
c_9	$u^{71} - 2u^{70} + \dots + 35022u + 3953$
c_{10}	$u^{71} - 6u^{70} + \dots - 3424u + 319$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4	$y^{71} - 67y^{70} + \dots - 45y - 1$
c_2, c_6	$y^{71} + 39y^{70} + \dots - 36864y - 4096$
c_5	$y^{71} + 12y^{70} + \dots - 6y - 1$
c_7	$y^{71} + 72y^{69} + \dots - 10y - 1$
c_8, c_{11}	$y^{71} - 48y^{70} + \dots - 10y - 1$
c_9	$y^{71} - 48y^{70} + \dots - 314283574y - 15626209$
c_{10}	$y^{71} - 72y^{70} + \dots + 3210942y - 101761$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.621616 + 0.757699I$ $a = -0.520196 - 1.278890I$ $b = 0.77239 - 1.38072I$	$-8.79734 - 8.72585I$	0
$u = -0.621616 - 0.757699I$ $a = -0.520196 + 1.278890I$ $b = 0.77239 + 1.38072I$	$-8.79734 + 8.72585I$	0
$u = 0.513135 + 0.804698I$ $a = -0.625469 + 0.710978I$ $b = 0.343529 + 0.197975I$	$-1.92491 - 1.08364I$	0
$u = 0.513135 - 0.804698I$ $a = -0.625469 - 0.710978I$ $b = 0.343529 - 0.197975I$	$-1.92491 + 1.08364I$	0
$u = 0.573139 + 0.542700I$ $a = -1.36366 + 1.05846I$ $b = 0.579667 + 1.190180I$	$-5.36921 + 5.60292I$	$-4.23205 - 1.95004I$
$u = 0.573139 - 0.542700I$ $a = -1.36366 - 1.05846I$ $b = 0.579667 - 1.190180I$	$-5.36921 - 5.60292I$	$-4.23205 + 1.95004I$
$u = -0.775802 + 0.143132I$ $a = -0.189904 - 0.120697I$ $b = -0.590838 + 0.168836I$	$1.57443 - 0.30385I$	$7.03884 - 0.55864I$
$u = -0.775802 - 0.143132I$ $a = -0.189904 + 0.120697I$ $b = -0.590838 - 0.168836I$	$1.57443 + 0.30385I$	$7.03884 + 0.55864I$
$u = -0.050131 + 0.783968I$ $a = 0.86098 - 2.36171I$ $b = 0.357475 - 1.213820I$	$-6.99999 - 3.26565I$	$-6.82531 + 6.65441I$
$u = -0.050131 - 0.783968I$ $a = 0.86098 + 2.36171I$ $b = 0.357475 + 1.213820I$	$-6.99999 + 3.26565I$	$-6.82531 - 6.65441I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.749759 + 0.966431I$ $a = 0.27470 + 1.81378I$ $b = -0.194327 + 0.887939I$	$-1.12559 - 1.87856I$	0
$u = -0.749759 - 0.966431I$ $a = 0.27470 - 1.81378I$ $b = -0.194327 - 0.887939I$	$-1.12559 + 1.87856I$	0
$u = 0.651616 + 0.380129I$ $a = 0.128462 - 0.217584I$ $b = -0.950465 - 0.547836I$	$0.16886 + 3.43064I$	$1.32233 - 8.48531I$
$u = 0.651616 - 0.380129I$ $a = 0.128462 + 0.217584I$ $b = -0.950465 + 0.547836I$	$0.16886 - 3.43064I$	$1.32233 + 8.48531I$
$u = 0.982401 + 0.777247I$ $a = 0.0103051 + 0.0993017I$ $b = 0.847736 - 0.223685I$	$-0.76386 + 6.94431I$	0
$u = 0.982401 - 0.777247I$ $a = 0.0103051 - 0.0993017I$ $b = 0.847736 + 0.223685I$	$-0.76386 - 6.94431I$	0
$u = 1.196400 + 0.406962I$ $a = -0.0962558 - 0.0436996I$ $b = 0.166256 + 0.769936I$	$-2.28261 + 6.08346I$	0
$u = 1.196400 - 0.406962I$ $a = -0.0962558 + 0.0436996I$ $b = 0.166256 - 0.769936I$	$-2.28261 - 6.08346I$	0
$u = -1.068610 + 0.686746I$ $a = -0.172216 + 0.127673I$ $b = 0.636931 + 0.433595I$	$2.34440 - 1.95014I$	0
$u = -1.068610 - 0.686746I$ $a = -0.172216 - 0.127673I$ $b = 0.636931 - 0.433595I$	$2.34440 + 1.95014I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.509062 + 1.200470I$ $a = -0.098773 + 1.288770I$ $b = -0.04900 + 1.62786I$	$-14.7704 + 4.4090I$	0
$u = 0.509062 - 1.200470I$ $a = -0.098773 - 1.288770I$ $b = -0.04900 - 1.62786I$	$-14.7704 - 4.4090I$	0
$u = -0.585356 + 0.316293I$ $a = 2.37838 - 2.14743I$ $b = 0.472300 + 1.255780I$	$-8.04028 + 4.80757I$	$3.79140 + 4.67263I$
$u = -0.585356 - 0.316293I$ $a = 2.37838 + 2.14743I$ $b = 0.472300 - 1.255780I$	$-8.04028 - 4.80757I$	$3.79140 - 4.67263I$
$u = 0.894754 + 1.015750I$ $a = 0.46009 - 1.55526I$ $b = -0.280654 - 1.250440I$	$-5.52892 + 6.64078I$	0
$u = 0.894754 - 1.015750I$ $a = 0.46009 + 1.55526I$ $b = -0.280654 + 1.250440I$	$-5.52892 - 6.64078I$	0
$u = -0.378627 + 0.497963I$ $a = 0.36207 + 1.47520I$ $b = -0.55003 + 1.38741I$	$-2.62165 - 3.78828I$	$-7.5138 + 12.3973I$
$u = -0.378627 - 0.497963I$ $a = 0.36207 - 1.47520I$ $b = -0.55003 - 1.38741I$	$-2.62165 + 3.78828I$	$-7.5138 - 12.3973I$
$u = -0.214548 + 0.558917I$ $a = -1.15528 + 2.43443I$ $b = 0.021877 + 0.744451I$	$-1.31227 - 1.35935I$	$-5.28068 + 4.63416I$
$u = -0.214548 - 0.558917I$ $a = -1.15528 - 2.43443I$ $b = 0.021877 - 0.744451I$	$-1.31227 + 1.35935I$	$-5.28068 - 4.63416I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.232241 + 0.550466I$ $a = -0.229573 - 1.365780I$ $b = 0.53215 - 1.35587I$	$-4.60632 + 2.57396I$	$-14.4639 - 9.6502I$
$u = 0.232241 - 0.550466I$ $a = -0.229573 + 1.365780I$ $b = 0.53215 + 1.35587I$	$-4.60632 - 2.57396I$	$-14.4639 + 9.6502I$
$u = 0.035331 + 0.546911I$ $a = -3.02113 + 2.09727I$ $b = -0.278145 + 0.620196I$	$-1.42339 - 1.14206I$	$-7.64564 + 4.36852I$
$u = 0.035331 - 0.546911I$ $a = -3.02113 - 2.09727I$ $b = -0.278145 - 0.620196I$	$-1.42339 + 1.14206I$	$-7.64564 - 4.36852I$
$u = -0.084299 + 0.536575I$ $a = 0.197726 + 0.218088I$ $b = 1.46733 + 0.55222I$	$-5.71064 - 0.88851I$	$-19.3340 + 4.3203I$
$u = -0.084299 - 0.536575I$ $a = 0.197726 - 0.218088I$ $b = 1.46733 - 0.55222I$	$-5.71064 + 0.88851I$	$-19.3340 - 4.3203I$
$u = 0.98379 + 1.07460I$ $a = -0.0372116 - 0.1123680I$ $b = -1.281980 + 0.428483I$	$-6.81481 + 9.66907I$	0
$u = 0.98379 - 1.07460I$ $a = -0.0372116 + 0.1123680I$ $b = -1.281980 - 0.428483I$	$-6.81481 - 9.66907I$	0
$u = -1.43299 + 0.26730I$ $a = 0.144509 - 0.036331I$ $b = -0.127147 - 0.930225I$	$-1.031500 - 0.354146I$	0
$u = -1.43299 - 0.26730I$ $a = 0.144509 + 0.036331I$ $b = -0.127147 + 0.930225I$	$-1.031500 + 0.354146I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.410100 + 0.311510I$ $a = -7.00348 + 3.46773I$ $b = 0.307554 + 0.337684I$	$-3.57140 - 0.57623I$	$-2.3848 - 22.6336I$
$u = 0.410100 - 0.311510I$ $a = -7.00348 - 3.46773I$ $b = 0.307554 - 0.337684I$	$-3.57140 + 0.57623I$	$-2.3848 + 22.6336I$
$u = -0.95336 + 1.14595I$ $a = 0.310856 - 0.085089I$ $b = -1.038550 - 0.330627I$	$-2.29132 - 4.25686I$	0
$u = -0.95336 - 1.14595I$ $a = 0.310856 + 0.085089I$ $b = -1.038550 + 0.330627I$	$-2.29132 + 4.25686I$	0
$u = 1.27141 + 0.80457I$ $a = -0.808425 + 1.120290I$ $b = 0.141043 + 0.976339I$	$-4.54539 + 0.34097I$	0
$u = 1.27141 - 0.80457I$ $a = -0.808425 - 1.120290I$ $b = 0.141043 - 0.976339I$	$-4.54539 - 0.34097I$	0
$u = 0.375079 + 0.308494I$ $a = 1.93835 - 0.93583I$ $b = -0.483446 - 0.898105I$	$-0.04861 + 2.05474I$	$-0.05845 - 2.58157I$
$u = 0.375079 - 0.308494I$ $a = 1.93835 + 0.93583I$ $b = -0.483446 + 0.898105I$	$-0.04861 - 2.05474I$	$-0.05845 + 2.58157I$
$u = 1.07563 + 1.06925I$ $a = -0.71329 + 1.38663I$ $b = 0.554582 + 1.234190I$	$-3.85560 + 12.20440I$	0
$u = 1.07563 - 1.06925I$ $a = -0.71329 - 1.38663I$ $b = 0.554582 - 1.234190I$	$-3.85560 - 12.20440I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.340640 + 0.213069I$ $a = -6.49139 + 4.25195I$ $b = -0.311768 - 0.896973I$	$-2.19246 + 1.77118I$	$13.6954 + 18.4226I$
$u = -0.340640 - 0.213069I$ $a = -6.49139 - 4.25195I$ $b = -0.311768 + 0.896973I$	$-2.19246 - 1.77118I$	$13.6954 - 18.4226I$
$u = 0.124910 + 0.377859I$ $a = -0.37983 + 1.61319I$ $b = 0.831063 - 0.230779I$	$-2.61258 + 0.40782I$	$-2.91513 + 1.25335I$
$u = 0.124910 - 0.377859I$ $a = -0.37983 - 1.61319I$ $b = 0.831063 + 0.230779I$	$-2.61258 - 0.40782I$	$-2.91513 - 1.25335I$
$u = 1.18478 + 1.08230I$ $a = 0.735003 - 0.565771I$ $b = -1.045740 - 0.098007I$	$-6.35450 - 1.85292I$	0
$u = 1.18478 - 1.08230I$ $a = 0.735003 + 0.565771I$ $b = -1.045740 + 0.098007I$	$-6.35450 + 1.85292I$	0
$u = -1.13576 + 1.14489I$ $a = -0.65087 - 1.28968I$ $b = 0.483907 - 1.062650I$	$0.43763 - 6.35749I$	0
$u = -1.13576 - 1.14489I$ $a = -0.65087 + 1.28968I$ $b = 0.483907 + 1.062650I$	$0.43763 + 6.35749I$	0
$u = 1.04219 + 1.27794I$ $a = 0.078842 - 1.121010I$ $b = 0.313191 - 1.037600I$	$-4.09299 - 4.00272I$	0
$u = 1.04219 - 1.27794I$ $a = 0.078842 + 1.121010I$ $b = 0.313191 + 1.037600I$	$-4.09299 + 4.00272I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.18923 + 1.15866I$ $a = 0.751838 - 1.187430I$ $b = -0.74894 - 1.32485I$	$-9.7419 + 16.8559I$	0
$u = 1.18923 - 1.15866I$ $a = 0.751838 + 1.187430I$ $b = -0.74894 + 1.32485I$	$-9.7419 - 16.8559I$	0
$u = -0.321575$ $a = -13.9658$ $b = 0.869697$	-4.26740	40.4800
$u = -0.32809 + 1.70346I$ $a = 0.134157 - 1.015440I$ $b = -0.269373 - 1.279760I$	$-7.91168 - 0.39314I$	0
$u = -0.32809 - 1.70346I$ $a = 0.134157 + 1.015440I$ $b = -0.269373 + 1.279760I$	$-7.91168 + 0.39314I$	0
$u = -1.33473 + 1.32716I$ $a = 0.619234 + 1.017330I$ $b = -0.627257 + 1.263310I$	$-5.26918 - 10.31530I$	0
$u = -1.33473 - 1.32716I$ $a = 0.619234 - 1.017330I$ $b = -0.627257 - 1.263310I$	$-5.26918 + 10.31530I$	0
$u = 1.80582 + 0.79238I$ $a = 0.682403 - 0.591220I$ $b = -0.414392 - 1.329890I$	$-11.03720 + 3.15602I$	0
$u = 1.80582 - 0.79238I$ $a = 0.682403 + 0.591220I$ $b = -0.414392 + 1.329890I$	$-11.03720 - 3.15602I$	0
$u = 1.16409 + 1.64419I$ $a = -0.028085 + 0.784646I$ $b = -0.52176 + 1.31571I$	$-10.25460 - 7.45224I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.16409 - 1.64419I$		
$a = -0.028085 - 0.784646I$	$-10.25460 + 7.45224I$	0
$b = -0.52176 - 1.31571I$		

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

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^5 - 2u^4 - u^3 + 3u^2 - 2 \\ 0 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} u^5 - 2u^4 - u^3 + 3u^2 - 2 \\ 0 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} -u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^5 + 2u^3 - u \\ u^5 - u^4 - 2u^3 + u^2 + u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^5 - 2u^4 - u^3 + 2u^2 - 1 \\ u^4 \end{pmatrix}$$

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

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

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

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = 3u^5 - 7u^4 - 4u^3 + 11u^2 - 8$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u - 1)^6$
c_2, c_6	u^6
c_3, c_4	$(u + 1)^6$
c_5, c_{10}	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$
c_7, c_{11}	$u^6 - u^5 - u^4 + 2u^3 - u + 1$
c_8, c_9	$u^6 + u^5 - u^4 - 2u^3 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4	$(y - 1)^6$
c_2, c_6	y^6
c_5, c_{10}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_7, c_8, c_9 c_{11}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.002190 + 0.295542I$ $a = 0.344968 + 0.764807I$ $b = 0$	$0.245672 - 0.924305I$	$1.12292 + 1.33143I$
$u = -1.002190 - 0.295542I$ $a = 0.344968 - 0.764807I$ $b = 0$	$0.245672 + 0.924305I$	$1.12292 - 1.33143I$
$u = 0.428243 + 0.664531I$ $a = -1.68613 + 1.92635I$ $b = 0$	$-3.53554 - 0.92430I$	$-6.82874 + 7.13914I$
$u = 0.428243 - 0.664531I$ $a = -1.68613 - 1.92635I$ $b = 0$	$-3.53554 + 0.92430I$	$-6.82874 - 7.13914I$
$u = 1.073950 + 0.558752I$ $a = -0.158836 - 0.437639I$ $b = 0$	$-1.64493 + 5.69302I$	$-0.29418 - 2.69056I$
$u = 1.073950 - 0.558752I$ $a = -0.158836 + 0.437639I$ $b = 0$	$-1.64493 - 5.69302I$	$-0.29418 + 2.69056I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u - 1)^6)(u^{71} - 7u^{70} + \dots - 3u + 1)$
c_2, c_6	$u^6(u^{71} - u^{70} + \dots + 320u + 64)$
c_3, c_4	$((u + 1)^6)(u^{71} - 7u^{70} + \dots - 3u + 1)$
c_5	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)(u^{71} + 6u^{70} + \dots + 2u + 1)$
c_7	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{71} + 12u^{70} + \dots - 2u - 1)$
c_8	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)(u^{71} - 2u^{70} + \dots + 10u + 1)$
c_9	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)(u^{71} - 2u^{70} + \dots + 35022u + 3953)$
c_{10}	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)(u^{71} - 6u^{70} + \dots - 3424u + 319)$
c_{11}	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{71} - 2u^{70} + \dots + 10u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4	$((y - 1)^6)(y^{71} - 67y^{70} + \dots - 45y - 1)$
c_2, c_6	$y^6(y^{71} + 39y^{70} + \dots - 36864y - 4096)$
c_5	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{71} + 12y^{70} + \dots - 6y - 1)$
c_7	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{71} + 72y^{69} + \dots - 10y - 1)$
c_8, c_{11}	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{71} - 48y^{70} + \dots - 10y - 1)$
c_9	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)$ $\cdot (y^{71} - 48y^{70} + \dots - 314283574y - 15626209)$
c_{10}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)$ $\cdot (y^{71} - 72y^{70} + \dots + 3210942y - 101761)$