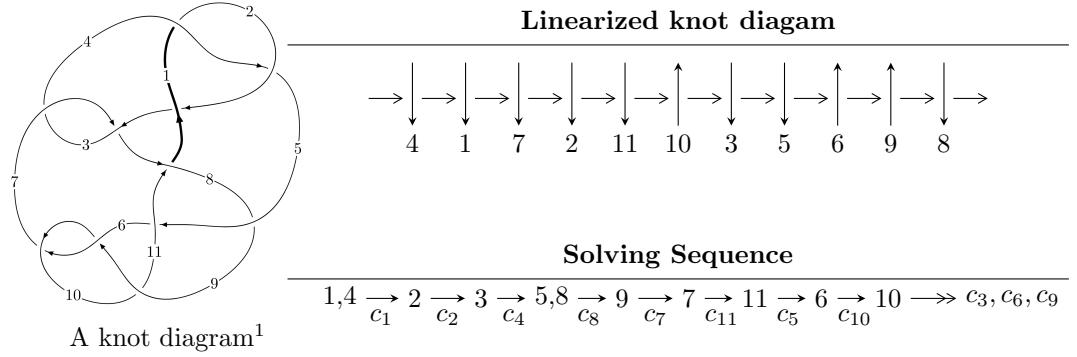


## $11a_{32}$ ( $K11a_{32}$ )



Ideals for irreducible components<sup>2</sup> of  $X_{\text{par}}$

$$I_1^u = \langle -2667u^{74} - 16330u^{73} + \dots + 32b + 2491, -73u^{74} - 402u^{73} + \dots + 4a + 14,$$

$$u^{75} + 7u^{74} + \dots - 5u - 1 \rangle$$

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

\* 2 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 81 representations.

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<sup>1</sup>The image of knot diagram is generated by the software “**Draw programme**” developed by Andrew Bartholomew(<http://www.layer8.co.uk/math/draw/index.htm#Running-draw>), where we modified some parts for our purpose(<https://github.com/CATsTAILs/LinksPainter>).

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

$$\text{I. } I_1^u = \langle -2667u^{74} - 16330u^{73} + \dots + 32b + 2491, -73u^{74} - 402u^{73} + \dots + 4a + 14, u^{75} + 7u^{74} + \dots - 5u - 1 \rangle$$

(i) **Arc colorings**

$$\begin{aligned} a_1 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_2 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix} \\ a_8 &= \begin{pmatrix} \frac{73}{4}u^{74} + \frac{201}{2}u^{73} + \dots - 28u - \frac{7}{2} \\ 83.3438u^{74} + 510.313u^{73} + \dots - 333.875u - 77.8438 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -46.8438u^{74} - 314.063u^{73} + \dots + 281.125u + 72.8438 \\ 139.344u^{74} + 836.563u^{73} + \dots - 502.625u - 113.094 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -\frac{45}{2}u^{74} - 161u^{73} + \dots + 171u + \frac{185}{4} \\ 127.594u^{74} + 769.063u^{73} + \dots - 466.625u - 105.094 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -u^7 + 2u^5 + 2u^4 - 2u^3 - 2u^2 + 2 \\ \frac{1}{32}u^{74} + \frac{3}{16}u^{73} + \dots - \frac{9}{8}u - \frac{1}{32} \end{pmatrix} \\ a_6 &= \begin{pmatrix} \frac{3}{32}u^{74} + \frac{9}{16}u^{73} + \dots - \frac{43}{8}u - \frac{3}{32} \\ 1.28125u^{74} + 7.75000u^{73} + \dots - 4.31250u - 1.34375 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 1.06250u^{74} + 6.43750u^{73} + \dots - 2.43750u - 0.125000 \\ -1.34375u^{74} - 8.12500u^{73} + \dots + 5.56250u + 1.40625 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 1.06250u^{74} + 6.43750u^{73} + \dots - 2.43750u - 0.125000 \\ -1.34375u^{74} - 8.12500u^{73} + \dots + 5.56250u + 1.40625 \end{pmatrix} \end{aligned}$$

(ii) **Obstruction class** = -1

(iii) **Cusp Shapes** =  $\frac{1275}{8}u^{74} + \frac{15911}{16}u^{73} + \dots - \frac{11065}{16}u - \frac{2603}{16}$

**(iv) u-Polynomials at the component**

Crossings	u-Polynomials at each crossing
$c_1, c_4$	$u^{75} - 7u^{74} + \cdots - 5u + 1$
$c_2$	$u^{75} + 35u^{74} + \cdots + 5u + 1$
$c_3, c_7$	$u^{75} + u^{74} + \cdots + 128u + 64$
$c_5$	$u^{75} - 6u^{74} + \cdots - 164u + 77$
$c_6, c_9$	$u^{75} - 2u^{74} + \cdots - 6u^2 + 1$
$c_8$	$u^{75} + 2u^{74} + \cdots + 126u + 9$
$c_{10}$	$u^{75} - 36u^{74} + \cdots + 12u - 1$
$c_{11}$	$u^{75} - 8u^{74} + \cdots + 26798u - 565$

**(v) Riley Polynomials at the component**

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$y^{75} - 35y^{74} + \cdots + 5y - 1$
$c_2$	$y^{75} + 17y^{74} + \cdots - 207y - 1$
$c_3, c_7$	$y^{75} + 39y^{74} + \cdots - 61440y - 4096$
$c_5$	$y^{75} + 20y^{74} + \cdots - 398760y - 5929$
$c_6, c_9$	$y^{75} - 36y^{74} + \cdots + 12y - 1$
$c_8$	$y^{75} - 12y^{74} + \cdots + 2088y - 81$
$c_{10}$	$y^{75} + 8y^{74} + \cdots + 56y - 1$
$c_{11}$	$y^{75} + 24y^{74} + \cdots + 571587624y - 319225$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.406046 + 0.914346I$ $a = -0.83062 - 1.51440I$ $b = 0.60234 + 1.46500I$	$5.40227 - 10.31970I$	0
$u = -0.406046 - 0.914346I$ $a = -0.83062 + 1.51440I$ $b = 0.60234 - 1.46500I$	$5.40227 + 10.31970I$	0
$u = -0.454473 + 0.894363I$ $a = -0.56950 - 1.42313I$ $b = 0.45430 + 1.38825I$	$7.45504 - 2.41458I$	0
$u = -0.454473 - 0.894363I$ $a = -0.56950 + 1.42313I$ $b = 0.45430 - 1.38825I$	$7.45504 + 2.41458I$	0
$u = -0.616299 + 0.807630I$ $a = 0.160572 - 0.892832I$ $b = 0.141279 + 0.953665I$	$4.34347 + 1.49968I$	0
$u = -0.616299 - 0.807630I$ $a = 0.160572 + 0.892832I$ $b = 0.141279 - 0.953665I$	$4.34347 - 1.49968I$	0
$u = -0.408706 + 0.889849I$ $a = 0.80491 + 1.38796I$ $b = -0.59555 - 1.38804I$	$2.98486 - 5.33708I$	0
$u = -0.408706 - 0.889849I$ $a = 0.80491 - 1.38796I$ $b = -0.59555 + 1.38804I$	$2.98486 + 5.33708I$	0
$u = -0.843169 + 0.484968I$ $a = 0.203680 + 0.416849I$ $b = 0.961078 + 0.362588I$	$1.69304 + 2.02908I$	0
$u = -0.843169 - 0.484968I$ $a = 0.203680 - 0.416849I$ $b = 0.961078 - 0.362588I$	$1.69304 - 2.02908I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.891387 + 0.371717I$		
$a = -0.033242 - 0.565045I$	$-3.04790 + 0.34112I$	0
$b = -1.42939 - 0.58093I$		
$u = -0.891387 - 0.371717I$		
$a = -0.033242 + 0.565045I$	$-3.04790 - 0.34112I$	0
$b = -1.42939 + 0.58093I$		
$u = -0.582384 + 0.856983I$		
$a = -0.062854 + 1.166120I$	$8.27872 - 1.80903I$	0
$b = -0.127560 - 1.134840I$		
$u = -0.582384 - 0.856983I$		
$a = -0.062854 - 1.166120I$	$8.27872 + 1.80903I$	0
$b = -0.127560 + 1.134840I$		
$u = -0.959321 + 0.422476I$		
$a = -0.127985 - 0.694740I$	$-3.43299 + 2.76594I$	0
$b = -1.52139 - 0.15181I$		
$u = -0.959321 - 0.422476I$		
$a = -0.127985 + 0.694740I$	$-3.43299 - 2.76594I$	0
$b = -1.52139 + 0.15181I$		
$u = -0.648496 + 0.836558I$		
$a = -0.351520 + 0.975110I$	$6.99192 + 6.13645I$	0
$b = -0.006205 - 0.945446I$		
$u = -0.648496 - 0.836558I$		
$a = -0.351520 - 0.975110I$	$6.99192 - 6.13645I$	0
$b = -0.006205 + 0.945446I$		
$u = -0.868237 + 0.338548I$		
$a = -0.012725 + 0.536185I$	$-1.13942 - 4.67222I$	0
$b = 1.41093 + 0.77808I$		
$u = -0.868237 - 0.338548I$		
$a = -0.012725 - 0.536185I$	$-1.13942 + 4.67222I$	0
$b = 1.41093 - 0.77808I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.921822 + 0.543679I$		
$a = 0.80291 - 1.93730I$	$2.49508 - 2.11040I$	0
$b = 0.450724 + 1.151160I$		
$u = 0.921822 - 0.543679I$		
$a = 0.80291 + 1.93730I$	$2.49508 + 2.11040I$	0
$b = 0.450724 - 1.151160I$		
$u = 0.744498 + 0.529322I$		
$a = -1.44577 + 1.56624I$	$3.05917 - 2.25044I$	0
$b = 0.149282 - 0.958064I$		
$u = 0.744498 - 0.529322I$		
$a = -1.44577 - 1.56624I$	$3.05917 + 2.25044I$	0
$b = 0.149282 + 0.958064I$		
$u = -0.993853 + 0.440511I$		
$a = 0.166101 + 0.783333I$	$-1.89293 + 7.72902I$	0
$b = 1.56989 - 0.06150I$		
$u = -0.993853 - 0.440511I$		
$a = 0.166101 - 0.783333I$	$-1.89293 - 7.72902I$	0
$b = 1.56989 + 0.06150I$		
$u = 1.004560 + 0.452388I$		
$a = -0.33920 + 1.62466I$	$-3.12121 - 3.06401I$	0
$b = -0.761658 - 0.767228I$		
$u = 1.004560 - 0.452388I$		
$a = -0.33920 - 1.62466I$	$-3.12121 + 3.06401I$	0
$b = -0.761658 + 0.767228I$		
$u = -0.395112 + 0.797470I$		
$a = 0.829656 + 0.944652I$	$1.26952 - 3.45416I$	0
$b = -0.635642 - 1.147260I$		
$u = -0.395112 - 0.797470I$		
$a = 0.829656 - 0.944652I$	$1.26952 + 3.45416I$	0
$b = -0.635642 + 1.147260I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.976476 + 0.533746I$		
$a = -0.54173 + 1.96861I$	$-1.82400 - 4.84040I$	0
$b = -0.682122 - 1.116880I$		
$u = 0.976476 - 0.533746I$		
$a = -0.54173 - 1.96861I$	$-1.82400 + 4.84040I$	0
$b = -0.682122 + 1.116880I$		
$u = 1.046730 + 0.394188I$		
$a = 0.135208 - 1.388780I$	$-2.04922 + 1.40109I$	0
$b = 0.855036 + 0.498982I$		
$u = 1.046730 - 0.394188I$		
$a = 0.135208 + 1.388780I$	$-2.04922 - 1.40109I$	0
$b = 0.855036 - 0.498982I$		
$u = 0.980018 + 0.559884I$		
$a = 0.55911 - 2.09753I$	$0.49666 - 9.74933I$	0
$b = 0.69820 + 1.23354I$		
$u = 0.980018 - 0.559884I$		
$a = 0.55911 + 2.09753I$	$0.49666 + 9.74933I$	0
$b = 0.69820 - 1.23354I$		
$u = 0.625774 + 0.553199I$		
$a = -1.82685 + 1.38552I$	$1.56352 + 5.23293I$	0
$b = 0.488149 - 0.843348I$		
$u = 0.625774 - 0.553199I$		
$a = -1.82685 - 1.38552I$	$1.56352 - 5.23293I$	0
$b = 0.488149 + 0.843348I$		
$u = -0.428137 + 0.690269I$		
$a = -0.668511 - 0.521270I$	$1.89347 + 1.09587I$	$-2.44221 - 2.55300I$
$b = 0.588098 + 0.950437I$		
$u = -0.428137 - 0.690269I$		
$a = -0.668511 + 0.521270I$	$1.89347 - 1.09587I$	$-2.44221 + 2.55300I$
$b = 0.588098 - 0.950437I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.170610 + 0.255451I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.271560 - 0.787523I$	$-2.42380 - 3.72637I$	0
$b = 0.928676 - 0.247240I$		
$u = 1.170610 - 0.255451I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -0.271560 + 0.787523I$	$-2.42380 + 3.72637I$	0
$b = 0.928676 + 0.247240I$		
$u = 1.195250 + 0.198323I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 0.271492 + 0.579940I$	$-3.76765 + 0.74515I$	0
$b = -0.788651 + 0.477728I$		
$u = 1.195250 - 0.198323I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 0.271492 - 0.579940I$	$-3.76765 - 0.74515I$	0
$b = -0.788651 - 0.477728I$		
$u = -1.014220 + 0.671104I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 1.008370 + 0.729025I$	$3.13966 + 4.03622I$	0
$b = 0.428776 - 0.699364I$		
$u = -1.014220 - 0.671104I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 1.008370 - 0.729025I$	$3.13966 - 4.03622I$	0
$b = 0.428776 + 0.699364I$		
$u = 0.625476 + 0.471165I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 1.67010 - 1.18891I$	$-0.750144 + 0.597052I$	$-5.79846 + 0.I$
$b = -0.365304 + 0.668182I$		
$u = 0.625476 - 0.471165I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = 1.67010 + 1.18891I$	$-0.750144 - 0.597052I$	$-5.79846 + 0.I$
$b = -0.365304 - 0.668182I$		
$u = -0.996956 + 0.705289I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -1.135140 - 0.591809I$	$5.93451 - 0.41079I$	0
$b = -0.214156 + 0.626907I$		
$u = -0.996956 - 0.705289I$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	
$a = -1.135140 + 0.591809I$	$5.93451 + 0.41079I$	0
$b = -0.214156 - 0.626907I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.777815$		
$a = 0.931575$	-1.12557	-9.38810
$b = 0.0235617$		
$u = -1.096560 + 0.590139I$		
$a = 0.699149 + 1.173110I$	-0.07882 + 3.89973I	0
$b = 1.06597 - 1.05792I$		
$u = -1.096560 - 0.590139I$		
$a = 0.699149 - 1.173110I$	-0.07882 - 3.89973I	0
$b = 1.06597 + 1.05792I$		
$u = -1.050220 + 0.693988I$		
$a = -1.17073 - 0.86818I$	6.86340 + 7.55493I	0
$b = -0.326464 + 0.944045I$		
$u = -1.050220 - 0.693988I$		
$a = -1.17073 + 0.86818I$	6.86340 - 7.55493I	0
$b = -0.326464 - 0.944045I$		
$u = 1.267990 + 0.074126I$		
$a = -0.176506 - 0.199334I$	1.311430 - 0.241237I	0
$b = 0.364909 - 0.990702I$		
$u = 1.267990 - 0.074126I$		
$a = -0.176506 + 0.199334I$	1.311430 + 0.241237I	0
$b = 0.364909 + 0.990702I$		
$u = 1.263610 + 0.138529I$		
$a = 0.321540 + 0.309132I$	-2.79598 + 2.38150I	0
$b = -0.669397 + 0.885758I$		
$u = 1.263610 - 0.138529I$		
$a = 0.321540 - 0.309132I$	-2.79598 - 2.38150I	0
$b = -0.669397 - 0.885758I$		
$u = -1.120130 + 0.610216I$		
$a = -0.79865 - 1.28631I$	-0.87148 + 8.74235I	0
$b = -0.99237 + 1.25830I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.120130 - 0.610216I$		
$a = -0.79865 + 1.28631I$	$-0.87148 - 8.74235I$	0
$b = -0.99237 - 1.25830I$		
$u = 1.292750 + 0.134584I$		
$a = -0.368918 - 0.227788I$	$-0.53723 + 7.20125I$	0
$b = 0.699572 - 1.035680I$		
$u = 1.292750 - 0.134584I$		
$a = -0.368918 + 0.227788I$	$-0.53723 - 7.20125I$	0
$b = 0.699572 + 1.035680I$		
$u = -1.129100 + 0.660193I$		
$a = 1.06700 + 1.32077I$	$5.41191 + 8.13992I$	0
$b = 0.66904 - 1.42604I$		
$u = -1.129100 - 0.660193I$		
$a = 1.06700 - 1.32077I$	$5.41191 - 8.13992I$	0
$b = 0.66904 + 1.42604I$		
$u = -1.145670 + 0.642227I$		
$a = -0.97178 - 1.41886I$	$0.76093 + 10.98050I$	0
$b = -0.83020 + 1.50674I$		
$u = -1.145670 - 0.642227I$		
$a = -0.97178 + 1.41886I$	$0.76093 - 10.98050I$	0
$b = -0.83020 - 1.50674I$		
$u = -1.155510 + 0.649574I$		
$a = 1.01483 + 1.47364I$	$3.1307 + 16.0547I$	0
$b = 0.79889 - 1.59357I$		
$u = -1.155510 - 0.649574I$		
$a = 1.01483 - 1.47364I$	$3.1307 - 16.0547I$	0
$b = 0.79889 + 1.59357I$		
$u = 0.147490 + 0.463827I$		
$a = -2.03597 + 0.59027I$	$0.40746 - 4.84347I$	$-2.88894 + 6.95560I$
$b = 0.787606 + 0.109338I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.147490 - 0.463827I$		
$a = -2.03597 - 0.59027I$	$0.40746 + 4.84347I$	$-2.88894 - 6.95560I$
$b = 0.787606 - 0.109338I$		
$u = 0.267477 + 0.336990I$		
$a = 2.04829 - 0.66333I$	$-1.335430 - 0.455559I$	$-7.14666 + 1.75479I$
$b = -0.581312 + 0.049909I$		
$u = 0.267477 - 0.336990I$		
$a = 2.04829 + 0.66333I$	$-1.335430 + 0.455559I$	$-7.14666 - 1.75479I$
$b = -0.581312 - 0.049909I$		
$u = -0.215453 + 0.258244I$		
$a = -0.988925 + 0.959286I$	$1.62489 + 1.27832I$	$1.31582 - 1.24706I$
$b = 0.402835 + 0.578892I$		
$u = -0.215453 - 0.258244I$		
$a = -0.988925 - 0.959286I$	$1.62489 - 1.27832I$	$1.31582 + 1.24706I$
$b = 0.402835 - 0.578892I$		

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

(i) Arc colorings

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

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

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

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

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

$$a_8 = \begin{pmatrix} 0 \\ b \end{pmatrix}$$

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

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

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

$$a_6 = \begin{pmatrix} b^2 - 1 \\ -b^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} b^4 - b^2 + 1 \\ -b^4 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} b^4 - b^2 + 1 \\ -b^4 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes =  $-b^5 + 4b^4 + 2b^3 - 4b^2 + 2b - 5$

**(iv) u-Polynomials at the component**

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

**(v) Riley Polynomials at the component**

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

**(vi) Complex Volumes and Cusp Shapes**

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$		
$a = 0$	$-3.53554 + 0.92430I$	$-10.03026 - 0.88960I$
$b = -1.002190 + 0.295542I$		
$u = 1.00000$		
$a = 0$	$-3.53554 - 0.92430I$	$-10.03026 + 0.88960I$
$b = -1.002190 - 0.295542I$		
$u = 1.00000$		
$a = 0$	$0.245672 + 0.924305I$	$-5.20252 - 1.68215I$
$b = 0.428243 + 0.664531I$		
$u = 1.00000$		
$a = 0$	$0.245672 - 0.924305I$	$-5.20252 + 1.68215I$
$b = 0.428243 - 0.664531I$		
$u = 1.00000$		
$a = 0$	$-1.64493 - 5.69302I$	$-6.76721 + 6.15196I$
$b = 1.073950 + 0.558752I$		
$u = 1.00000$		
$a = 0$	$-1.64493 + 5.69302I$	$-6.76721 - 6.15196I$
$b = 1.073950 - 0.558752I$		

### III. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$((u - 1)^6)(u^{75} - 7u^{74} + \cdots - 5u + 1)$
$c_2$	$((u + 1)^6)(u^{75} + 35u^{74} + \cdots + 5u + 1)$
$c_3, c_7$	$u^6(u^{75} + u^{74} + \cdots + 128u + 64)$
$c_4$	$((u + 1)^6)(u^{75} - 7u^{74} + \cdots - 5u + 1)$
$c_5$	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)(u^{75} - 6u^{74} + \cdots - 164u + 77)$
$c_6$	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{75} - 2u^{74} + \cdots - 6u^2 + 1)$
$c_8$	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{75} + 2u^{74} + \cdots + 126u + 9)$
$c_9$	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)(u^{75} - 2u^{74} + \cdots - 6u^2 + 1)$
$c_{10}$	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)(u^{75} - 36u^{74} + \cdots + 12u - 1)$
$c_{11}$	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{75} - 8u^{74} + \cdots + 26798u - 565)$

#### IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1, c_4$	$((y - 1)^6)(y^{75} - 35y^{74} + \dots + 5y - 1)$
$c_2$	$((y - 1)^6)(y^{75} + 17y^{74} + \dots - 207y - 1)$
$c_3, c_7$	$y^6(y^{75} + 39y^{74} + \dots - 61440y - 4096)$
$c_5$	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{75} + 20y^{74} + \dots - 398760y - 5929)$
$c_6, c_9$	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{75} - 36y^{74} + \dots + 12y - 1)$
$c_8$	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{75} - 12y^{74} + \dots + 2088y - 81)$
$c_{10}$	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{75} + 8y^{74} + \dots + 56y - 1)$
$c_{11}$	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1) \\ \cdot (y^{75} + 24y^{74} + \dots + 571587624y - 319225)$