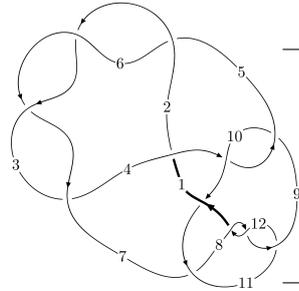
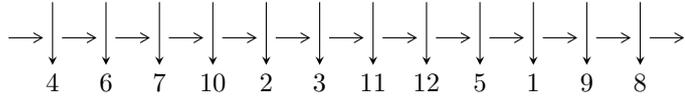


12a<sub>0877</sub> (K12a<sub>0877</sub>)



A knot diagram<sup>1</sup>

**Linearized knot diagram**



**Solving Sequence**

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

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

$$I_1^u = \langle -u^{68} + 2u^{67} + \dots + 2b + 1, u^{70} - 3u^{69} + \dots + a - 1, u^{71} - 3u^{70} + \dots + u + 1 \rangle$$

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

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

<sup>1</sup>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>).

<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.

$$I_1^u = \langle -u^{68} + 2u^{67} + \dots + 2b + 1, u^{70} - 3u^{69} + \dots + a - 1, u^{71} - 3u^{70} + \dots + u + 1 \rangle$$

I.

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u^{70} + 3u^{69} + \dots + 9u + 1 \\ \frac{1}{2}u^{68} - u^{67} + \dots + \frac{1}{2}u - \frac{1}{2} \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{17} + 8u^{15} + \dots + u + 2 \\ -\frac{1}{2}u^{68} + u^{67} + \dots + \frac{1}{2}u + \frac{1}{2} \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^3 + 2u \\ u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{3}{2}u^{70} + \frac{9}{2}u^{69} + \dots - 20u^2 + \frac{7}{2}u \\ 2u^{69} - 5u^{68} + \dots - 9u^2 - u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} \frac{1}{2}u^{70} - \frac{3}{2}u^{69} + \dots - \frac{1}{2}u - 2 \\ u^{68} - 2u^{67} + \dots - u - 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^6 - 3u^4 - 2u^2 + 1 \\ -u^8 - 4u^6 - 4u^4 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{70} + 3u^{69} + \dots + u - 1 \\ 2u^{69} - \frac{11}{2}u^{68} + \dots - \frac{5}{2}u - \frac{1}{2} \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes =  $4u^{70} - \frac{23}{2}u^{69} + \dots - 3u - \frac{39}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
$c_1$	$u^{71} - 18u^{70} + \dots + 1020u + 207$
$c_2, c_3, c_5$ $c_6$	$u^{71} + 4u^{70} + \dots + 2u + 1$
$c_4, c_9$	$u^{71} - u^{70} + \dots + 96u + 64$
$c_7$	$u^{71} + 3u^{70} + \dots + 81u + 41$
$c_8, c_{11}, c_{12}$	$u^{71} - 3u^{70} + \dots + u + 1$
$c_{10}$	$u^{71} - 15u^{70} + \dots - 3735u + 1779$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{71} + 2y^{70} + \dots + 577962y - 42849$
$c_2, c_3, c_5$ $c_6$	$y^{71} - 82y^{70} + \dots + 18y - 1$
$c_4, c_9$	$y^{71} + 35y^{70} + \dots - 48128y - 4096$
$c_7$	$y^{71} + 5y^{70} + \dots - 2459y - 1681$
$c_8, c_{11}, c_{12}$	$y^{71} + 65y^{70} + \dots + 21y - 1$
$c_{10}$	$y^{71} + 25y^{70} + \dots + 74059077y - 3164841$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.298230 + 1.093620I$ $a = 0.472081 - 1.045720I$ $b = -0.791807 + 0.676221I$	$-6.03948 + 6.58052I$	0
$u = -0.298230 - 1.093620I$ $a = 0.472081 + 1.045720I$ $b = -0.791807 - 0.676221I$	$-6.03948 - 6.58052I$	0
$u = 0.102051 + 1.130360I$ $a = 1.069210 + 0.380589I$ $b = -0.72342 - 1.50387I$	$-7.48210 - 1.83544I$	0
$u = 0.102051 - 1.130360I$ $a = 1.069210 - 0.380589I$ $b = -0.72342 + 1.50387I$	$-7.48210 + 1.83544I$	0
$u = 0.001916 + 1.166800I$ $a = -0.976565 - 0.112077I$ $b = 0.156188 + 1.052190I$	$0.637366 - 0.498211I$	0
$u = 0.001916 - 1.166800I$ $a = -0.976565 + 0.112077I$ $b = 0.156188 - 1.052190I$	$0.637366 + 0.498211I$	0
$u = -0.245256 + 1.144100I$ $a = -0.485411 + 0.540876I$ $b = 0.176587 - 0.284101I$	$1.43623 + 4.65090I$	0
$u = -0.245256 - 1.144100I$ $a = -0.485411 - 0.540876I$ $b = 0.176587 + 0.284101I$	$1.43623 - 4.65090I$	0
$u = 0.435227 + 0.691944I$ $a = 2.00492 - 1.14289I$ $b = 1.037160 + 0.882341I$	$-5.01043 + 6.59194I$	$-13.20650 - 2.66983I$
$u = 0.435227 - 0.691944I$ $a = 2.00492 + 1.14289I$ $b = 1.037160 - 0.882341I$	$-5.01043 - 6.59194I$	$-13.20650 + 2.66983I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.739876 + 0.307979I$ $a = -1.61074 + 2.29865I$ $b = -1.85820 + 1.64262I$	$-6.37543 - 10.74810I$	$-15.6876 + 7.6872I$
$u = 0.739876 - 0.307979I$ $a = -1.61074 - 2.29865I$ $b = -1.85820 - 1.64262I$	$-6.37543 + 10.74810I$	$-15.6876 - 7.6872I$
$u = 0.713231 + 0.321743I$ $a = 1.56422 - 1.71673I$ $b = 1.52378 - 0.87969I$	$1.31275 - 8.10010I$	$-12.6669 + 9.1497I$
$u = 0.713231 - 0.321743I$ $a = 1.56422 + 1.71673I$ $b = 1.52378 + 0.87969I$	$1.31275 + 8.10010I$	$-12.6669 - 9.1497I$
$u = -0.128401 + 1.230520I$ $a = 0.692003 + 0.027663I$ $b = 0.237864 - 0.428319I$	$2.84553 + 1.96965I$	0
$u = -0.128401 - 1.230520I$ $a = 0.692003 - 0.027663I$ $b = 0.237864 + 0.428319I$	$2.84553 - 1.96965I$	0
$u = -0.755331 + 0.102098I$ $a = 1.034040 - 0.668175I$ $b = 1.392900 - 0.229407I$	$-9.05815 - 2.69439I$	$-17.2027 + 2.3657I$
$u = -0.755331 - 0.102098I$ $a = 1.034040 + 0.668175I$ $b = 1.392900 + 0.229407I$	$-9.05815 + 2.69439I$	$-17.2027 - 2.3657I$
$u = 0.439054 + 0.620113I$ $a = -1.40227 + 1.08942I$ $b = -1.066550 - 0.215001I$	$2.45899 + 4.08230I$	$-9.92349 - 3.84314I$
$u = 0.439054 - 0.620113I$ $a = -1.40227 - 1.08942I$ $b = -1.066550 + 0.215001I$	$2.45899 - 4.08230I$	$-9.92349 + 3.84314I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.674989 + 0.337780I$ $a = -1.34947 + 1.07393I$ $b = -0.989958 + 0.168014I$	$2.62967 - 4.11560I$	$-9.32664 + 4.02462I$
$u = 0.674989 - 0.337780I$ $a = -1.34947 - 1.07393I$ $b = -0.989958 - 0.168014I$	$2.62967 + 4.11560I$	$-9.32664 - 4.02462I$
$u = 0.581829 + 0.443643I$ $a = 0.680110 + 0.569291I$ $b = -0.245593 + 1.039410I$	$-1.63615 - 1.95033I$	$-11.69879 + 3.63383I$
$u = 0.581829 - 0.443643I$ $a = 0.680110 - 0.569291I$ $b = -0.245593 - 1.039410I$	$-1.63615 + 1.95033I$	$-11.69879 - 3.63383I$
$u = -0.665154 + 0.290764I$ $a = -0.66447 - 3.13003I$ $b = -1.39674 - 2.23065I$	$-8.61600 + 4.53223I$	$-17.3927 - 4.7302I$
$u = -0.665154 - 0.290764I$ $a = -0.66447 + 3.13003I$ $b = -1.39674 + 2.23065I$	$-8.61600 - 4.53223I$	$-17.3927 + 4.7302I$
$u = 0.468748 + 0.533484I$ $a = 0.676056 - 0.908880I$ $b = 0.924805 - 0.383040I$	$3.46160 + 0.26111I$	$-7.03816 + 2.83567I$
$u = 0.468748 - 0.533484I$ $a = 0.676056 + 0.908880I$ $b = 0.924805 + 0.383040I$	$3.46160 - 0.26111I$	$-7.03816 - 2.83567I$
$u = -0.700876 + 0.066926I$ $a = -0.320841 + 0.679183I$ $b = -0.468291 + 0.181364I$	$-1.81580 - 1.13539I$	$-14.1583 + 5.8319I$
$u = -0.700876 - 0.066926I$ $a = -0.320841 - 0.679183I$ $b = -0.468291 - 0.181364I$	$-1.81580 + 1.13539I$	$-14.1583 - 5.8319I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.258326 + 1.292250I$ $a = 0.318100 - 0.050819I$ $b = 0.556440 - 0.515684I$	$2.39024 + 2.32819I$	0
$u = -0.258326 - 1.292250I$ $a = 0.318100 + 0.050819I$ $b = 0.556440 + 0.515684I$	$2.39024 - 2.32819I$	0
$u = -0.601819 + 0.265142I$ $a = 1.04132 + 2.29902I$ $b = 1.19691 + 1.23124I$	$-1.30198 + 2.69072I$	$-15.0112 - 7.4612I$
$u = -0.601819 - 0.265142I$ $a = 1.04132 - 2.29902I$ $b = 1.19691 - 1.23124I$	$-1.30198 - 2.69072I$	$-15.0112 + 7.4612I$
$u = -0.310470 + 1.307140I$ $a = -0.415211 - 0.292408I$ $b = -1.55166 + 1.02452I$	$-4.65881 + 1.15217I$	0
$u = -0.310470 - 1.307140I$ $a = -0.415211 + 0.292408I$ $b = -1.55166 - 1.02452I$	$-4.65881 - 1.15217I$	0
$u = 0.570835 + 0.293611I$ $a = 0.264731 - 0.690812I$ $b = -0.267146 + 0.080518I$	$-1.35568 - 1.48226I$	$-14.0552 + 4.1663I$
$u = 0.570835 - 0.293611I$ $a = 0.264731 + 0.690812I$ $b = -0.267146 - 0.080518I$	$-1.35568 + 1.48226I$	$-14.0552 - 4.1663I$
$u = 0.588263 + 0.180533I$ $a = 0.224002 + 1.011270I$ $b = 1.142880 + 0.126677I$	$-10.13840 - 0.81774I$	$-16.4578 + 7.6947I$
$u = 0.588263 - 0.180533I$ $a = 0.224002 - 1.011270I$ $b = 1.142880 - 0.126677I$	$-10.13840 + 0.81774I$	$-16.4578 - 7.6947I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.344431 + 0.497662I$		
$a = 2.83955 + 0.77238I$	$-7.51125 - 1.04755I$	$-14.9755 - 1.6313I$
$b = 0.94400 - 1.15638I$		
$u = -0.344431 - 0.497662I$		
$a = 2.83955 - 0.77238I$	$-7.51125 + 1.04755I$	$-14.9755 + 1.6313I$
$b = 0.94400 + 1.15638I$		
$u = 0.226184 + 1.379720I$		
$a = -0.265552 - 0.233022I$	$-5.13918 - 3.78426I$	0
$b = -1.54638 - 1.23737I$		
$u = 0.226184 - 1.379720I$		
$a = -0.265552 + 0.233022I$	$-5.13918 + 3.78426I$	0
$b = -1.54638 + 1.23737I$		
$u = -0.197528 + 1.395160I$		
$a = 0.029403 + 1.285120I$	$4.62936 + 2.48780I$	0
$b = 1.66328 + 0.44069I$		
$u = -0.197528 - 1.395160I$		
$a = 0.029403 - 1.285120I$	$4.62936 - 2.48780I$	0
$b = 1.66328 - 0.44069I$		
$u = -0.23579 + 1.40424I$		
$a = 0.70004 - 1.35070I$	$4.03931 + 5.77114I$	0
$b = -1.87408 - 1.49381I$		
$u = -0.23579 - 1.40424I$		
$a = 0.70004 + 1.35070I$	$4.03931 - 5.77114I$	0
$b = -1.87408 + 1.49381I$		
$u = -0.14993 + 1.41755I$		
$a = -0.89559 - 1.43480I$	$-1.60972 + 0.83337I$	0
$b = -1.71955 + 0.56930I$		
$u = -0.14993 - 1.41755I$		
$a = -0.89559 + 1.43480I$	$-1.60972 - 0.83337I$	0
$b = -1.71955 - 0.56930I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.22925 + 1.41881I$ $a = -0.097979 + 0.504327I$ $b = 0.265160 + 0.348113I$	$4.15030 - 4.46057I$	0
$u = 0.22925 - 1.41881I$ $a = -0.097979 - 0.504327I$ $b = 0.265160 - 0.348113I$	$4.15030 + 4.46057I$	0
$u = -0.25948 + 1.41528I$ $a = -1.29651 + 1.38162I$ $b = 2.11173 + 2.46119I$	$-3.16239 + 7.90974I$	0
$u = -0.25948 - 1.41528I$ $a = -1.29651 - 1.38162I$ $b = 2.11173 - 2.46119I$	$-3.16239 - 7.90974I$	0
$u = 0.25971 + 1.43435I$ $a = 0.054326 - 1.159680I$ $b = 1.282050 - 0.501952I$	$8.30772 - 7.52976I$	0
$u = 0.25971 - 1.43435I$ $a = 0.054326 + 1.159680I$ $b = 1.282050 + 0.501952I$	$8.30772 + 7.52976I$	0
$u = 0.28992 + 1.42978I$ $a = -0.58859 - 1.61725I$ $b = 2.63944 - 1.76837I$	$-0.8177 - 14.4909I$	0
$u = 0.28992 - 1.42978I$ $a = -0.58859 + 1.61725I$ $b = 2.63944 + 1.76837I$	$-0.8177 + 14.4909I$	0
$u = 0.27661 + 1.43275I$ $a = 0.25480 + 1.44753I$ $b = -2.05975 + 1.10091I$	$6.93099 - 11.70450I$	0
$u = 0.27661 - 1.43275I$ $a = 0.25480 - 1.44753I$ $b = -2.05975 - 1.10091I$	$6.93099 + 11.70450I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.15789 + 1.45296I$ $a = 0.407502 + 0.650068I$ $b = -1.38045 + 0.86766I$	$9.77362 - 1.97022I$	0
$u = 0.15789 - 1.45296I$ $a = 0.407502 - 0.650068I$ $b = -1.38045 - 0.86766I$	$9.77362 + 1.97022I$	0
$u = 0.13021 + 1.45714I$ $a = -0.082139 - 1.018390I$ $b = 1.51015 - 0.72465I$	$9.02491 + 2.18165I$	0
$u = 0.13021 - 1.45714I$ $a = -0.082139 + 1.018390I$ $b = 1.51015 + 0.72465I$	$9.02491 - 2.18165I$	0
$u = 0.19927 + 1.44971I$ $a = -0.666580 + 0.052748I$ $b = 0.707982 - 0.886535I$	$4.44129 - 4.75957I$	0
$u = 0.19927 - 1.44971I$ $a = -0.666580 - 0.052748I$ $b = 0.707982 + 0.886535I$	$4.44129 + 4.75957I$	0
$u = 0.10296 + 1.46363I$ $a = -0.336387 + 1.303930I$ $b = -1.45662 + 0.53173I$	$1.83471 + 4.95872I$	0
$u = 0.10296 - 1.46363I$ $a = -0.336387 - 1.303930I$ $b = -1.45662 - 0.53173I$	$1.83471 - 4.95872I$	0
$u = -0.401557 + 0.210000I$ $a = -1.79421 - 0.99079I$ $b = -0.818427 - 0.029641I$	$-0.590115 + 0.032455I$	$-12.52222 + 0.27337I$
$u = -0.401557 - 0.210000I$ $a = -1.79421 + 0.99079I$ $b = -0.818427 + 0.029641I$	$-0.590115 - 0.032455I$	$-12.52222 - 0.27337I$

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.270889$		
$a = -2.15579$	$-0.645856$	$-14.8110$
$b = -0.509358$		

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

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

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

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

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

$$a_3 = \begin{pmatrix} u^2b + bu + 2b \\ 2b \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^2b - bu - 2b \\ u^2 - 2b + u + 1 \end{pmatrix}$$

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

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

(ii) Obstruction class = 1

(iii) Cusp Shapes =  $bu - 3u^2 - b - 5u - 20$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.215080 + 1.307140I$ $a = 0$ $b = -0.542287 + 0.460350I$	$2.03717 + 2.82812I$	$-13.8803 - 6.1171I$
$u = -0.215080 + 1.307140I$ $a = 0$ $b = 1.41973 - 1.20521I$	$-5.85852 + 2.82812I$	$-14.0872 - 1.5287I$
$u = -0.215080 - 1.307140I$ $a = 0$ $b = -0.542287 - 0.460350I$	$2.03717 - 2.82812I$	$-13.8803 + 6.1171I$
$u = -0.215080 - 1.307140I$ $a = 0$ $b = 1.41973 + 1.20521I$	$-5.85852 - 2.82812I$	$-14.0872 + 1.5287I$
$u = -0.569840$ $a = 0$ $b = -1.22142$	$-9.99610$	$-16.2080$
$u = -0.569840$ $a = 0$ $b = 0.466540$	$-2.10041$	$-18.8570$

### III. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$((u^2 + u - 1)^3)(u^{71} - 18u^{70} + \dots + 1020u + 207)$
$c_2, c_3$	$((u^2 + u - 1)^3)(u^{71} + 4u^{70} + \dots + 2u + 1)$
$c_4, c_9$	$u^6(u^{71} - u^{70} + \dots + 96u + 64)$
$c_5, c_6$	$((u^2 - u - 1)^3)(u^{71} + 4u^{70} + \dots + 2u + 1)$
$c_7$	$((u^3 + u^2 - 1)^2)(u^{71} + 3u^{70} + \dots + 81u + 41)$
$c_8$	$((u^3 - u^2 + 2u - 1)^2)(u^{71} - 3u^{70} + \dots + u + 1)$
$c_{10}$	$((u^3 + u^2 - 1)^2)(u^{71} - 15u^{70} + \dots - 3735u + 1779)$
$c_{11}, c_{12}$	$((u^3 + u^2 + 2u + 1)^2)(u^{71} - 3u^{70} + \dots + u + 1)$

#### IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1$	$((y^2 - 3y + 1)^3)(y^{71} + 2y^{70} + \dots + 577962y - 42849)$
$c_2, c_3, c_5$ $c_6$	$((y^2 - 3y + 1)^3)(y^{71} - 82y^{70} + \dots + 18y - 1)$
$c_4, c_9$	$y^6(y^{71} + 35y^{70} + \dots - 48128y - 4096)$
$c_7$	$((y^3 - y^2 + 2y - 1)^2)(y^{71} + 5y^{70} + \dots - 2459y - 1681)$
$c_8, c_{11}, c_{12}$	$((y^3 + 3y^2 + 2y - 1)^2)(y^{71} + 65y^{70} + \dots + 21y - 1)$
$c_{10}$	$((y^3 - y^2 + 2y - 1)^2)(y^{71} + 25y^{70} + \dots + 7.40591 \times 10^7 y - 3164841)$