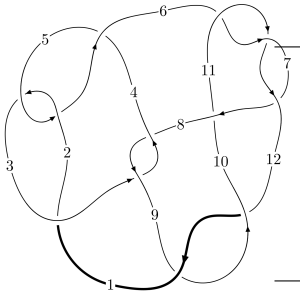
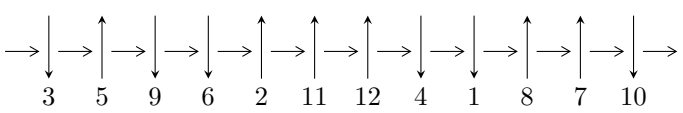
$12a_{0178}$ $(K12a_{0178})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$I_1^u = \langle u^{76} - u^{75} + \cdots + 2b - 5u,\ 2u^{78} - 4u^{77} + \cdots + 2a - 1,\ u^{79} - 3u^{78} + \cdots + u - 1 \rangle$

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

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 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.

$$\boldsymbol{I_1^u = \langle u^{76}-u^{75}+\cdots+2b-5u,\ 2u^{78}-4u^{77}+\cdots+2a-1,\ u^{79}-3u^{78}+\cdots+u-1\rangle}$$

(i) Arc colorings

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

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

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

$$a_{12} = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{78}+2u^{77}+\cdots-\frac{3}{2}u+\frac{1}{2} \\ -\frac{1}{2}u^{76}+\frac{1}{2}u^{75}+\cdots-\frac{11}{2}u^2+\frac{5}{2}u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^2+1 \\ u^4-2u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -2u^{78}+4u^{77}+\cdots+5u-\frac{1}{2} \\ 3u^{78}-5u^{77}+\cdots+\frac{3}{2}u+1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -5u^{78}+8u^{77}+\cdots+\frac{17}{2}u-\frac{5}{2} \\ 5u^{78}-8u^{77}+\cdots+\frac{3}{2}u+2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^9-4u^7+5u^5-2u^3+u \\ -u^{11}+5u^9-8u^7+3u^5+u^3+u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{78}-u^{77}+\cdots+\frac{13}{2}u+\frac{1}{2} \\ 3u^{78}-5u^{77}+\cdots+\frac{3}{2}u+1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{13}-6u^{11}+13u^9-12u^7+6u^5-4u^3+u \\ -u^{15}+7u^{13}-18u^{11}+19u^9-6u^7+2u^5-4u^3-u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^5+2u^3-u \\ u^7-3u^5+2u^3+u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{11}{2}u^{78}-\frac{19}{2}u^{77}+\cdots-22u+\frac{3}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{79} + 24u^{78} + \cdots - 14u - 1$
c_2, c_5	$u^{79} + 6u^{78} + \cdots + 2u + 1$
c_3, c_8	$u^{79} + u^{78} + \cdots - 2048u - 1024$
c_6, c_7, c_{11}	$u^{79} - 3u^{78} + \cdots + u - 1$
c_9, c_{12}	$u^{79} - 11u^{78} + \cdots - 117u - 73$
c_{10}	$u^{79} + 9u^{78} + \cdots - 2487u + 851$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{79} + 68y^{78} + \cdots + 270y - 1$
c_2, c_5	$y^{79} + 24y^{78} + \cdots - 14y - 1$
c_3, c_8	$y^{79} + 55y^{78} + \cdots - 9437184y - 1048576$
c_6, c_7, c_{11}	$y^{79} - 75y^{78} + \cdots - 23y - 1$
c_9, c_{12}	$y^{79} + 73y^{78} + \cdots - 70115y - 5329$
c_{10}	$y^{79} - 31y^{78} + \cdots - 2637999y - 724201$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.960687 + 0.153679I$ $a = 0.507114 + 0.208480I$ $b = -0.750208 + 0.893053I$	$4.67325 - 2.88323I$	0
$u = 0.960687 - 0.153679I$ $a = 0.507114 - 0.208480I$ $b = -0.750208 - 0.893053I$	$4.67325 + 2.88323I$	0
$u = 0.827370 + 0.170912I$ $a = 0.960753 - 0.367241I$ $b = -0.764781 - 0.869204I$	$4.74752 + 2.85194I$	$5.96777 - 3.55563I$
$u = 0.827370 - 0.170912I$ $a = 0.960753 + 0.367241I$ $b = -0.764781 + 0.869204I$	$4.74752 - 2.85194I$	$5.96777 + 3.55563I$
$u = -0.431098 + 0.703014I$ $a = -0.011403 + 1.045270I$ $b = -0.906120 - 0.737961I$	$9.87956 - 5.56873I$	$5.48276 + 3.81380I$
$u = -0.431098 - 0.703014I$ $a = -0.011403 - 1.045270I$ $b = -0.906120 + 0.737961I$	$9.87956 + 5.56873I$	$5.48276 - 3.81380I$
$u = -0.417770 + 0.709165I$ $a = 2.06985 + 1.21835I$ $b = -0.786589 + 1.032560I$	$8.9584 - 11.8257I$	$3.97751 + 8.54937I$
$u = -0.417770 - 0.709165I$ $a = 2.06985 - 1.21835I$ $b = -0.786589 - 1.032560I$	$8.9584 + 11.8257I$	$3.97751 - 8.54937I$
$u = -0.541357 + 0.617925I$ $a = 1.260830 + 0.092818I$ $b = -0.902271 + 0.758090I$	$10.28590 + 1.15255I$	$6.41028 + 2.08924I$
$u = -0.541357 - 0.617925I$ $a = 1.260830 - 0.092818I$ $b = -0.902271 - 0.758090I$	$10.28590 - 1.15255I$	$6.41028 - 2.08924I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.554854+0.602818I$ $a=\ 0.818220+0.193142I$ $b=-0.794943-1.020680I$	$9.46345+7.42771I$	$5.21274-2.74453I$
$u=-0.554854-0.602818I$ $a=\ 0.818220-0.193142I$ $b=-0.794943+1.020680I$	$9.46345-7.42771I$	$5.21274+2.74453I$
$u=-0.460232+0.639959I$ $a=-0.538335-0.631341I$ $b=\ 0.819242-0.023424I$	$5.68856-2.11060I$	$6.83378+3.31832I$
$u=-0.460232-0.639959I$ $a=-0.538335+0.631341I$ $b=\ 0.819242+0.023424I$	$5.68856+2.11060I$	$6.83378-3.31832I$
$u=\ 0.446094+0.644815I$ $a=-2.25296+0.31798I$ $b=\ 0.776837+0.897829I$	$4.79648+5.02800I$	$3.77738-5.92269I$
$u=\ 0.446094-0.644815I$ $a=-2.25296-0.31798I$ $b=\ 0.776837-0.897829I$	$4.79648-5.02800I$	$3.77738+5.92269I$
$u=\ 1.211160+0.128664I$ $a=\ 1.28344-1.04569I$ $b=\ 0.018725-0.877436I$	$0.410093+0.569090I$	0
$u=\ 1.211160-0.128664I$ $a=\ 1.28344+1.04569I$ $b=\ 0.018725+0.877436I$	$0.410093-0.569090I$	0
$u=\ 0.465338+0.625622I$ $a=-0.819821+1.071380I$ $b=\ 0.783132-0.871429I$	$4.87790-0.84564I$	$4.12547-0.52207I$
$u=\ 0.465338-0.625622I$ $a=-0.819821-1.071380I$ $b=\ 0.783132+0.871429I$	$4.87790+0.84564I$	$4.12547+0.52207I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.416187+0.649698I$ $a=-1.47061-1.27515I$ $b=\ \ 0.281669-1.127160I$	$1.81369-5.81158I$	$1.46444+7.37025I$
$u=-0.416187-0.649698I$ $a=-1.47061+1.27515I$ $b=\ \ 0.281669+1.127160I$	$1.81369+5.81158I$	$1.46444-7.37025I$
$u=-0.467486+0.588976I$ $a=\ \ 0.271507+0.612178I$ $b=\ \ 0.318145+1.112630I$	$2.05435+1.75127I$	$2.62331-0.74126I$
$u=-0.467486-0.588976I$ $a=\ \ 0.271507-0.612178I$ $b=\ \ 0.318145-1.112630I$	$2.05435-1.75127I$	$2.62331+0.74126I$
$u=\ \ 1.26366$ $a=\ \ 0.931332$ $b=-0.238856$	2.75626	0
$u=\ \ 0.174701+0.686237I$ $a=-0.699194+0.373449I$ $b=-0.764897+0.812003I$	$2.54707+0.60070I$	$2.16281-1.57893I$
$u=\ \ 0.174701-0.686237I$ $a=-0.699194-0.373449I$ $b=-0.764897-0.812003I$	$2.54707-0.60070I$	$2.16281+1.57893I$
$u=\ \ 0.140244+0.692618I$ $a=\ \ 0.66990-1.89405I$ $b=-0.742698-0.939246I$	$2.15562+6.31590I$	$0.72997-6.99064I$
$u=\ \ 0.140244-0.692618I$ $a=\ \ 0.66990+1.89405I$ $b=-0.742698+0.939246I$	$2.15562-6.31590I$	$0.72997+6.99064I$
$u=\ \ 0.331444+0.619754I$ $a=\ \ 1.70156-0.90801I$ $b=-0.146875-0.718790I$	$-0.39859+2.41679I$	$-2.51815-2.50379I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.331444 - 0.619754I$ $a = 1.70156 + 0.90801I$ $b = -0.146875 + 0.718790I$	$-0.39859 - 2.41679I$	$-2.51815 + 2.50379I$
$u = -1.284980 + 0.179165I$ $a = -0.74042 - 1.23710I$ $b = 0.156711 - 1.014790I$	$1.15848 - 4.83085I$	0
$u = -1.284980 - 0.179165I$ $a = -0.74042 + 1.23710I$ $b = 0.156711 + 1.014790I$	$1.15848 + 4.83085I$	0
$u = -1.300270 + 0.074806I$ $a = -0.754795 + 0.685987I$ $b = 0.494882 + 1.001490I$	$3.08759 + 1.25662I$	0
$u = -1.300270 - 0.074806I$ $a = -0.754795 - 0.685987I$ $b = 0.494882 - 1.001490I$	$3.08759 - 1.25662I$	0
$u = -1.311810 + 0.262394I$ $a = 1.97615 + 0.97895I$ $b = -0.742423 + 0.968481I$	$6.68975 - 9.77430I$	0
$u = -1.311810 - 0.262394I$ $a = 1.97615 - 0.97895I$ $b = -0.742423 - 0.968481I$	$6.68975 + 9.77430I$	0
$u = 1.330220 + 0.148111I$ $a = -2.77349 + 0.42700I$ $b = 0.643454 + 0.948330I$	$4.02017 + 5.12137I$	0
$u = 1.330220 - 0.148111I$ $a = -2.77349 - 0.42700I$ $b = 0.643454 - 0.948330I$	$4.02017 - 5.12137I$	0
$u = 1.345390 + 0.105400I$ $a = -0.77119 + 1.72286I$ $b = 0.672238 - 0.709217I$	$4.74837 + 0.02263I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.345390 - 0.105400I$ $a = -0.77119 - 1.72286I$ $b = 0.672238 + 0.709217I$	$4.74837 - 0.02263I$	0
$u = -1.354000 + 0.125122I$ $a = -0.577117 + 0.093747I$ $b = 0.589160 - 0.295718I$	$5.02105 - 2.84369I$	0
$u = -1.354000 - 0.125122I$ $a = -0.577117 - 0.093747I$ $b = 0.589160 + 0.295718I$	$5.02105 + 2.84369I$	0
$u = -1.336080 + 0.257261I$ $a = 0.095226 + 0.877787I$ $b = -0.779371 - 0.771197I$	$7.28961 - 4.01466I$	0
$u = -1.336080 - 0.257261I$ $a = 0.095226 - 0.877787I$ $b = -0.779371 + 0.771197I$	$7.28961 + 4.01466I$	0
$u = 0.055935 + 0.584888I$ $a = 0.34048 + 2.64860I$ $b = 0.118978 + 0.935231I$	$-2.96390 + 2.06663I$	$-7.76438 - 4.75095I$
$u = 0.055935 - 0.584888I$ $a = 0.34048 - 2.64860I$ $b = 0.118978 - 0.935231I$	$-2.96390 - 2.06663I$	$-7.76438 + 4.75095I$
$u = 0.372135 + 0.444695I$ $a = 0.571797 + 0.154582I$ $b = -0.064395 + 0.528805I$	$0.152685 + 0.966028I$	$0.58728 - 4.99432I$
$u = 0.372135 - 0.444695I$ $a = 0.571797 - 0.154582I$ $b = -0.064395 - 0.528805I$	$0.152685 - 0.966028I$	$0.58728 + 4.99432I$
$u = -1.42465 + 0.19612I$ $a = 0.757172 + 0.386330I$ $b = -0.274557 - 0.523897I$	$5.85268 - 3.48752I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.42465-0.19612I$ $a=\ \ 0.757172-0.386330I$ $b=-0.274557+0.523897I$	$5.85268+3.48752I$	0
$u=-1.42914+0.23677I$ $a=\ \ 1.75980+0.17758I$ $b=-0.210954+0.737939I$	$5.24909-5.55916I$	0
$u=-1.42914-0.23677I$ $a=\ \ 1.75980-0.17758I$ $b=-0.210954-0.737939I$	$5.24909+5.55916I$	0
$u=-1.45767+0.01095I$ $a=\ \ 1.81232-0.84748I$ $b=-0.830455+0.896981I$	$11.59420-3.09088I$	0
$u=-1.45767-0.01095I$ $a=\ \ 1.81232+0.84748I$ $b=-0.830455-0.896981I$	$11.59420+3.09088I$	0
$u=\ \ 1.46442+0.23981I$ $a=-1.64516+0.18165I$ $b=\ \ 0.275942+1.152230I$	$7.87641+9.06816I$	0
$u=\ \ 1.46442-0.23981I$ $a=-1.64516-0.18165I$ $b=\ \ 0.275942-1.152230I$	$7.87641-9.06816I$	0
$u=\ \ 1.46930+0.21252I$ $a=-0.105941+0.396384I$ $b=\ \ 0.341084-1.138020I$	$8.28626+1.18360I$	0
$u=\ \ 1.46930-0.21252I$ $a=-0.105941-0.396384I$ $b=\ \ 0.341084+1.138020I$	$8.28626-1.18360I$	0
$u=-1.47358+0.23322I$ $a=-2.85449+0.44307I$ $b=\ \ 0.790272-0.913410I$	$10.99410-8.23765I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.47358-0.23322I$ $a=-2.85449-0.44307I$ $b=\ \ 0.790272+0.913410I$	$10.99410+8.23765I$	0
$u=-1.47618+0.22313I$ $a=-1.48000-1.76752I$ $b=\ \ 0.805517+0.864477I$	$11.14650-2.25375I$	0
$u=-1.47618-0.22313I$ $a=-1.48000+1.76752I$ $b=\ \ 0.805517-0.864477I$	$11.14650+2.25375I$	0
$u=\ \ 1.47734+0.22877I$ $a=-1.30565+0.55825I$ $b=\ \ 0.851193+0.043651I$	$11.94830+5.28265I$	0
$u=\ \ 1.47734-0.22877I$ $a=-1.30565-0.55825I$ $b=\ \ 0.851193-0.043651I$	$11.94830-5.28265I$	0
$u=\ \ 1.47342+0.26226I$ $a=\ \ 2.75426-0.27890I$ $b=-0.787624-1.043110I$	$15.0608+15.3708I$	0
$u=\ \ 1.47342-0.26226I$ $a=\ \ 2.75426+0.27890I$ $b=-0.787624+1.043110I$	$15.0608-15.3708I$	0
$u=\ \ 1.47783+0.25743I$ $a=\ \ 0.82024-1.67408I$ $b=-0.918969+0.728773I$	$16.0459+9.0741I$	0
$u=\ \ 1.47783-0.25743I$ $a=\ \ 0.82024+1.67408I$ $b=-0.918969-0.728773I$	$16.0459-9.0741I$	0
$u=\ \ 1.49805+0.19160I$ $a=\ \ 1.56162-1.06045I$ $b=-0.811404+1.021460I$	$16.1357-4.5825I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.49805 - 0.19160I$ $a = 1.56162 + 1.06045I$ $b = -0.811404 - 1.021460I$	$16.1357 + 4.5825I$	0
$u = 1.49830 + 0.20045I$ $a = 2.02683 + 0.60119I$ $b = -0.917511 - 0.773257I$	$16.9160 + 1.7936I$	0
$u = 1.49830 - 0.20045I$ $a = 2.02683 - 0.60119I$ $b = -0.917511 + 0.773257I$	$16.9160 - 1.7936I$	0
$u = -0.108953 + 0.459074I$ $a = -1.93875 - 2.39147I$ $b = 0.573629 - 0.929349I$	$-0.49704 - 2.88847I$	$-5.04267 + 1.92432I$
$u = -0.108953 - 0.459074I$ $a = -1.93875 + 2.39147I$ $b = 0.573629 + 0.929349I$	$-0.49704 + 2.88847I$	$-5.04267 - 1.92432I$
$u = 0.247554 + 0.377813I$ $a = 0.560959 + 0.199573I$ $b = 0.193812 + 0.327293I$	$0.102843 + 1.008930I$	$1.78319 - 6.38352I$
$u = 0.247554 - 0.377813I$ $a = 0.560959 - 0.199573I$ $b = 0.193812 - 0.327293I$	$0.102843 - 1.008930I$	$1.78319 + 6.38352I$
$u = -0.152462 + 0.276606I$ $a = 1.19363 - 1.28731I$ $b = 0.511852 + 0.767170I$	$0.09111 + 1.51758I$	$-2.07514 - 4.93514I$
$u = -0.152462 - 0.276606I$ $a = 1.19363 + 1.28731I$ $b = 0.511852 - 0.767170I$	$0.09111 - 1.51758I$	$-2.07514 + 4.93514I$

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

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} a \\ -u^3a - u^3 + au + a + u + 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^3a - au + u + 1 \\ -u^3a - u^3 + au + a + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^3 + a + 2u + 1 \\ -u^3a - u^3 + au + a + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^3 + a + 2u + 1 \\ -u^3a - u^3 + au + a + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^4 + u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^4a + 4u^3a + u^4 - 2u^2a + u^3 - 4au - 2u^2 - 5a + 3u + 1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_5	$(u^2-u+1)^5$
c_2	$(u^2+u+1)^5$
c_3, c_8	u^{10}
c_6, c_7	$(u^5-u^4-2u^3+u^2+u+1)^2$
c_9	$(u^5+u^4+2u^3+u^2+u+1)^2$
c_{10}	$(u^5-3u^4+4u^3-u^2-u+1)^2$
c_{11}	$(u^5+u^4-2u^3-u^2+u-1)^2$
c_{12}	$(u^5-u^4+2u^3-u^2+u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_5	$(y^2+y+1)^5$
c_3, c_8	y^{10}
c_6, c_7, c_{11}	$(y^5-5y^4+8y^3-3y^2-y-1)^2$
c_9, c_{12}	$(y^5+3y^4+4y^3+y^2-y-1)^2$
c_{10}	$(y^5-y^4+8y^3-3y^2+3y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.21774$ $a=-0.685143+0.545349I$ $b=\ \ 0.500000+0.866025I$	$2.40108+2.02988I$	$0.33682-4.42764I$
$u=-1.21774$ $a=-0.685143-0.545349I$ $b=\ \ 0.500000-0.866025I$	$2.40108-2.02988I$	$0.33682+4.42764I$
$u=-0.309916+0.549911I$ $a=\ \ 0.394874+0.200669I$ $b=\ \ 0.500000+0.866025I$	$0.329100+0.499304I$	$-0.01046+1.42329I$
$u=-0.309916+0.549911I$ $a=-1.52365-1.30833I$ $b=\ \ 0.500000-0.866025I$	$0.32910-3.56046I$	$2.49844+7.77102I$
$u=-0.309916-0.549911I$ $a=\ \ 0.394874-0.200669I$ $b=\ \ 0.500000-0.866025I$	$0.329100-0.499304I$	$-0.01046-1.42329I$
$u=-0.309916-0.549911I$ $a=-1.52365+1.30833I$ $b=\ \ 0.500000+0.866025I$	$0.32910+3.56046I$	$2.49844-7.77102I$
$u=\ \ 1.41878+0.21917I$ $a=-0.335573+0.598472I$ $b=\ \ 0.500000-0.866025I$	$5.87256+2.37095I$	$4.29156+0.98555I$
$u=\ \ 1.41878+0.21917I$ $a=-1.85051+0.27617I$ $b=\ \ 0.500000+0.866025I$	$5.87256+6.43072I$	$6.88365-7.29164I$
$u=\ \ 1.41878-0.21917I$ $a=-0.335573-0.598472I$ $b=\ \ 0.500000+0.866025I$	$5.87256-2.37095I$	$4.29156-0.98555I$
$u=\ \ 1.41878-0.21917I$ $a=-1.85051-0.27617I$ $b=\ \ 0.500000-0.866025I$	$5.87256-6.43072I$	$6.88365+7.29164I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$((u^2-u+1)^5)(u^{79}+24u^{78}+\cdots-14u-1)$
c_2	$((u^2+u+1)^5)(u^{79}+6u^{78}+\cdots+2u+1)$
c_3, c_8	$u^{10}(u^{79}+u^{78}+\cdots-2048u-1024)$
c_5	$((u^2-u+1)^5)(u^{79}+6u^{78}+\cdots+2u+1)$
c_6, c_7	$((u^5-u^4-2u^3+u^2+u+1)^2)(u^{79}-3u^{78}+\cdots+u-1)$
c_9	$((u^5+u^4+2u^3+u^2+u+1)^2)(u^{79}-11u^{78}+\cdots-117u-73)$
c_{10}	$((u^5-3u^4+4u^3-u^2-u+1)^2)(u^{79}+9u^{78}+\cdots-2487u+851)$
c_{11}	$((u^5+u^4-2u^3-u^2+u-1)^2)(u^{79}-3u^{78}+\cdots+u-1)$
c_{12}	$((u^5-u^4+2u^3-u^2+u-1)^2)(u^{79}-11u^{78}+\cdots-117u-73)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y^2+y+1)^5)(y^{79}+68y^{78}+\cdots+270y-1)$
c_2, c_5	$((y^2+y+1)^5)(y^{79}+24y^{78}+\cdots-14y-1)$
c_3, c_8	$y^{10}(y^{79}+55y^{78}+\cdots-9437184y-1048576)$
c_6, c_7, c_{11}	$((y^5-5y^4+8y^3-3y^2-y-1)^2)(y^{79}-75y^{78}+\cdots-23y-1)$
c_9, c_{12}	$((y^5+3y^4+4y^3+y^2-y-1)^2)(y^{79}+73y^{78}+\cdots-70115y-5329)$
c_{10}	$(y^5-y^4+8y^3-3y^2+3y-1)^2$ $\cdot(y^{79}-31y^{78}+\cdots-2637999y-724201)$