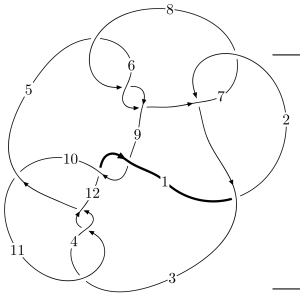
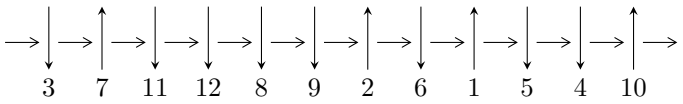
$12a_{0681}$ $(K12a_{0681})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle u^{76} - 35u^{74} + \cdots + b - 1,\ u^{75} + u^{74} + \cdots + a + 1,\ u^{77} + 2u^{76} + \cdots - u - 1 \rangle$$
$$I_2^u = \langle b,\ u^4 - u^3 - u^2 + a + u,\ u^5 - u^4 - 2u^3 + u^2 + u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 82 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.

$$\boldsymbol{I_1^u = \langle u^{76}-35u^{74}+\cdots+b-1,\ u^{75}+u^{74}+\cdots+a+1,\ u^{77}+2u^{76}+\cdots-u-1\rangle}$$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_7 = \begin{pmatrix} -u^{75}-u^{74}+\cdots-5u-1 \\ -u^{76}+35u^{74}+\cdots+u+1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{11}-6u^9+12u^7-8u^5+u^3-2u \\ -u^{11}+5u^9-8u^7+3u^5+u^3+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^{75}-u^{74}+\cdots-10u^2-4u \\ u^{76}-35u^{74}+\cdots+9u^2-1 \end{pmatrix}$$

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

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

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

$$a_6 = \begin{pmatrix} -u^{75}-u^{74}+\cdots-10u^2-4u \\ u^{37}-17u^{35}+\cdots+6u^2+u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2u^{76}+4u^{75}+\cdots-9u-6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{77}+33u^{76}+\cdots-7680u-1024$
c_2, c_7	$u^{77}+u^{76}+\cdots-96u-32$
c_3, c_4, c_{11}	$u^{77}+2u^{76}+\cdots-u-1$
c_5, c_6, c_8	$u^{77}-6u^{76}+\cdots+u-1$
c_9, c_{12}	$u^{77}+12u^{76}+\cdots+1689u+73$
c_{10}	$u^{77}-6u^{76}+\cdots+813u-935$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{77} + 13y^{76} + \cdots + 11141120y - 1048576$
c_2, c_7	$y^{77} + 33y^{76} + \cdots - 7680y - 1024$
c_3, c_4, c_{11}	$y^{77} - 72y^{76} + \cdots + 7y - 1$
c_5, c_6, c_8	$y^{77} - 68y^{76} + \cdots - 7y - 1$
c_9, c_{12}	$y^{77} + 60y^{76} + \cdots + 148363y - 5329$
c_{10}	$y^{77} - 24y^{76} + \cdots + 24711039y - 874225$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.118910+0.179695I$ $a=-0.440072+1.213090I$ $b=\ \ 0.513943-0.982821I$	$-4.41825-2.77630I$	0
$u=-1.118910-0.179695I$ $a=-0.440072-1.213090I$ $b=\ \ 0.513943+0.982821I$	$-4.41825+2.77630I$	0
$u=\ \ 0.388896+0.697285I$ $a=\ \ 2.58400+0.08701I$ $b=-0.694399+1.197770I$	$-6.76637-11.69120I$	$-8.55592+8.80415I$
$u=\ \ 0.388896-0.697285I$ $a=\ \ 2.58400-0.08701I$ $b=-0.694399-1.197770I$	$-6.76637+11.69120I$	$-8.55592-8.80415I$
$u=\ \ 0.467253+0.642938I$ $a=-1.072070+0.222088I$ $b=\ \ 0.025679-1.363990I$	$-11.71880-2.13120I$	$-12.50690+3.22543I$
$u=\ \ 0.467253-0.642938I$ $a=-1.072070-0.222088I$ $b=\ \ 0.025679+1.363990I$	$-11.71880+2.13120I$	$-12.50690-3.22543I$
$u=-1.199980+0.164041I$ $a=\ \ 0.765140-0.964895I$ $b=-0.662389+0.724093I$	$-0.198946+0.491194I$	0
$u=-1.199980-0.164041I$ $a=\ \ 0.765140+0.964895I$ $b=-0.662389-0.724093I$	$-0.198946-0.491194I$	0
$u=\ \ 0.550317+0.554367I$ $a=-0.557825-0.493865I$ $b=\ \ 0.660792+1.201360I$	$-7.39452+7.48341I$	$-10.14800-2.91847I$
$u=\ \ 0.550317-0.554367I$ $a=-0.557825+0.493865I$ $b=\ \ 0.660792-1.201360I$	$-7.39452-7.48341I$	$-10.14800+2.91847I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.382467 + 0.674572I$ $a = -2.43549 - 0.42583I$ $b = 0.583029 - 1.060690I$	$-1.41933 - 7.47214I$	$-5.05697 + 8.34642I$
$u = 0.382467 - 0.674572I$ $a = -2.43549 + 0.42583I$ $b = 0.583029 + 1.060690I$	$-1.41933 + 7.47214I$	$-5.05697 - 8.34642I$
$u = -0.391946 + 0.660763I$ $a = 1.07868 - 1.47152I$ $b = -1.058370 + 0.462731I$	$-4.41478 + 5.37995I$	$-7.77105 - 5.68914I$
$u = -0.391946 - 0.660763I$ $a = 1.07868 + 1.47152I$ $b = -1.058370 - 0.462731I$	$-4.41478 - 5.37995I$	$-7.77105 + 5.68914I$
$u = 0.392387 + 0.638561I$ $a = 1.89360 + 0.81444I$ $b = -0.337099 + 0.970309I$	$-3.46473 - 2.75353I$	$-9.00366 + 4.34907I$
$u = 0.392387 - 0.638561I$ $a = 1.89360 - 0.81444I$ $b = -0.337099 - 0.970309I$	$-3.46473 + 2.75353I$	$-9.00366 - 4.34907I$
$u = -1.25296$ $a = -0.489598$ $b = 0.440012$	-2.70327	0
$u = 1.247280 + 0.146275I$ $a = -2.07717 - 0.81765I$ $b = 0.556055 - 0.712579I$	$-3.52703 - 1.49966I$	0
$u = 1.247280 - 0.146275I$ $a = -2.07717 + 0.81765I$ $b = 0.556055 + 0.712579I$	$-3.52703 + 1.49966I$	0
$u = 0.512426 + 0.536307I$ $a = 0.551321 + 0.026348I$ $b = -0.538012 - 1.042190I$	$-1.97887 + 3.43479I$	$-6.68994 - 2.31052I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.512426 - 0.536307I$ $a = 0.551321 - 0.026348I$ $b = -0.538012 + 1.042190I$	$-1.97887 - 3.43479I$	$-6.68994 + 2.31052I$
$u = -0.488346 + 0.553137I$ $a = -1.48960 + 0.38906I$ $b = 1.044170 + 0.400052I$	$-4.84664 - 1.37205I$	$-9.12609 - 0.79115I$
$u = -0.488346 - 0.553137I$ $a = -1.48960 - 0.38906I$ $b = 1.044170 - 0.400052I$	$-4.84664 + 1.37205I$	$-9.12609 + 0.79115I$
$u = 1.254630 + 0.207259I$ $a = 2.05786 + 0.27148I$ $b = -0.637359 + 0.904548I$	$-0.73681 - 5.52218I$	0
$u = 1.254630 - 0.207259I$ $a = 2.05786 - 0.27148I$ $b = -0.637359 - 0.904548I$	$-0.73681 + 5.52218I$	0
$u = 0.453993 + 0.561890I$ $a = 0.036223 + 0.618083I$ $b = 0.244719 + 0.964800I$	$-3.76621 - 1.14578I$	$-10.36985 + 2.95072I$
$u = 0.453993 - 0.561890I$ $a = 0.036223 - 0.618083I$ $b = 0.244719 - 0.964800I$	$-3.76621 + 1.14578I$	$-10.36985 - 2.95072I$
$u = -0.345053 + 0.634395I$ $a = -0.540936 + 1.304630I$ $b = 0.687430 - 0.491293I$	$0.27587 + 2.54213I$	$-1.22958 - 3.86119I$
$u = -0.345053 - 0.634395I$ $a = -0.540936 - 1.304630I$ $b = 0.687430 + 0.491293I$	$0.27587 - 2.54213I$	$-1.22958 + 3.86119I$
$u = -1.266550 + 0.180413I$ $a = -1.16776 + 0.80875I$ $b = 0.835295 - 0.561310I$	$-3.88660 + 3.89208I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.266550-0.180413I$ $a=-1.16776-0.80875I$ $b=\ \ 0.835295+0.561310I$	$-3.88660-3.89208I$	0
$u=-0.263295+0.667225I$ $a=-0.30263-1.80362I$ $b=-0.322531+0.936487I$	$-3.32754+0.27451I$	$-8.04091-0.77276I$
$u=-0.263295-0.667225I$ $a=-0.30263+1.80362I$ $b=-0.322531-0.936487I$	$-3.32754-0.27451I$	$-8.04091+0.77276I$
$u=\ \ 1.268150+0.243748I$ $a=-2.03646+0.04790I$ $b=\ \ 0.637081-1.071140I$	$-5.48995-9.38623I$	0
$u=\ \ 1.268150-0.243748I$ $a=-2.03646-0.04790I$ $b=\ \ 0.637081+1.071140I$	$-5.48995+9.38623I$	0
$u=-0.623273+0.290139I$ $a=-0.841020-0.501914I$ $b=\ \ 0.400346+1.029660I$	$-4.77164+3.23057I$	$-10.85312-4.67428I$
$u=-0.623273-0.290139I$ $a=-0.841020+0.501914I$ $b=\ \ 0.400346-1.029660I$	$-4.77164-3.23057I$	$-10.85312+4.67428I$
$u=-0.076390+0.675447I$ $a=\ \ 2.15894+1.81721I$ $b=-0.585185-1.035670I$	$-1.33875+6.04370I$	$-3.74417-6.13811I$
$u=-0.076390-0.675447I$ $a=\ \ 2.15894-1.81721I$ $b=-0.585185+1.035670I$	$-1.33875-6.04370I$	$-3.74417+6.13811I$
$u=\ \ 1.352570+0.042876I$ $a=-0.466208-1.294710I$ $b=\ \ 0.174346-0.892035I$	$-5.20171-1.91816I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.352570 - 0.042876I$ $a = -0.466208 + 1.294710I$ $b = 0.174346 + 0.892035I$	$-5.20171 + 1.91816I$	0
$u = -1.35955$ $a = 0.837136$ $b = -0.928982$	-7.10233	0
$u = -0.040790 + 0.631699I$ $a = -2.35095 - 1.38726I$ $b = 0.630731 + 0.823161I$	$3.22737 + 2.45907I$	$2.41719 - 4.22669I$
$u = -0.040790 - 0.631699I$ $a = -2.35095 + 1.38726I$ $b = 0.630731 - 0.823161I$	$3.22737 - 2.45907I$	$2.41719 + 4.22669I$
$u = -0.385095 + 0.464622I$ $a = 0.995000 - 0.148955I$ $b = -0.526774 - 0.405932I$	$-0.270419 + 0.973560I$	$-2.30158 - 4.17778I$
$u = -0.385095 - 0.464622I$ $a = 0.995000 + 0.148955I$ $b = -0.526774 + 0.405932I$	$-0.270419 - 0.973560I$	$-2.30158 + 4.17778I$
$u = 0.033568 + 0.581274I$ $a = 2.74191 + 0.87771I$ $b = -0.687117 - 0.568792I$	$0.094766 - 1.112510I$	$-0.414963 + 0.658190I$
$u = 0.033568 - 0.581274I$ $a = 2.74191 - 0.87771I$ $b = -0.687117 + 0.568792I$	$0.094766 + 1.112510I$	$-0.414963 - 0.658190I$
$u = 1.39972 + 0.25277I$ $a = 0.700734 - 0.638857I$ $b = 0.251532 + 0.891469I$	$-8.62598 - 3.61399I$	0
$u = 1.39972 - 0.25277I$ $a = 0.700734 + 0.638857I$ $b = 0.251532 - 0.891469I$	$-8.62598 + 3.61399I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.42729 + 0.06631I$ $a = 0.417873 + 0.696599I$ $b = -0.374341 + 1.178740I$	$-11.08620 - 4.31379I$	0
$u = 1.42729 - 0.06631I$ $a = 0.417873 - 0.696599I$ $b = -0.374341 - 1.178740I$	$-11.08620 + 4.31379I$	0
$u = 1.43420 + 0.20084I$ $a = -0.399133 - 0.452591I$ $b = 0.643759 - 0.302963I$	$-6.06731 - 3.57322I$	0
$u = 1.43420 - 0.20084I$ $a = -0.399133 + 0.452591I$ $b = 0.643759 + 0.302963I$	$-6.06731 + 3.57322I$	0
$u = 1.43740 + 0.24134I$ $a = -0.080952 + 0.770503I$ $b = -0.743107 - 0.462573I$	$-5.45133 - 5.75261I$	0
$u = 1.43740 - 0.24134I$ $a = -0.080952 - 0.770503I$ $b = -0.743107 + 0.462573I$	$-5.45133 + 5.75261I$	0
$u = -1.45356 + 0.23958I$ $a = -1.51331 + 1.62581I$ $b = 0.362141 + 1.020760I$	$-9.40303 + 5.97378I$	0
$u = -1.45356 - 0.23958I$ $a = -1.51331 - 1.62581I$ $b = 0.362141 - 1.020760I$	$-9.40303 - 5.97378I$	0
$u = -1.46014 + 0.20569I$ $a = -0.29342 + 1.41422I$ $b = -0.220303 + 1.036640I$	$-9.90965 + 3.96691I$	0
$u = -1.46014 - 0.20569I$ $a = -0.29342 - 1.41422I$ $b = -0.220303 - 1.036640I$	$-9.90965 - 3.96691I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.45430+0.25332I$ $a=\ \ 1.82596-1.39983I$ $b=-0.594804-1.088050I$	$-7.32899+10.86290I$	0
$u=-1.45430-0.25332I$ $a=\ \ 1.82596+1.39983I$ $b=-0.594804+1.088050I$	$-7.32899-10.86290I$	0
$u=\ \ 1.45612+0.24706I$ $a=-0.082844-0.995707I$ $b=\ \ 1.093950+0.480855I$	$-10.36290-8.70087I$	0
$u=\ \ 1.45612-0.24706I$ $a=-0.082844+0.995707I$ $b=\ \ 1.093950-0.480855I$	$-10.36290+8.70087I$	0
$u=-1.46657+0.18641I$ $a=-0.067219-0.960194I$ $b=\ \ 0.502448-1.083330I$	$-8.31617-0.82132I$	0
$u=-1.46657-0.18641I$ $a=-0.067219+0.960194I$ $b=\ \ 0.502448+1.083330I$	$-8.31617+0.82132I$	0
$u=\ \ 1.46582+0.19639I$ $a=\ \ 0.512261+0.674143I$ $b=-1.098560+0.367386I$	$-11.11540-1.35977I$	0
$u=\ \ 1.46582-0.19639I$ $a=\ \ 0.512261-0.674143I$ $b=-1.098560-0.367386I$	$-11.11540+1.35977I$	0
$u=-1.45965+0.26153I$ $a=-1.90826+1.20800I$ $b=\ \ 0.712807+1.210690I$	$-12.7169+15.1904I$	0
$u=-1.45965-0.26153I$ $a=-1.90826-1.20800I$ $b=\ \ 0.712807-1.210690I$	$-12.7169-15.1904I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.48110+0.17882I$ $a=\ \ 0.014011+0.628968I$ $b=-0.647796+1.238820I$	$-13.9447-4.8720I$	0
$u=-1.48110-0.17882I$ $a=\ \ 0.014011-0.628968I$ $b=-0.647796-1.238820I$	$-13.9447+4.8720I$	0
$u=-1.47901+0.22669I$ $a=\ \ 0.999876-0.986609I$ $b=-0.050785-1.399520I$	$-18.0111+5.2978I$	0
$u=-1.47901-0.22669I$ $a=\ \ 0.999876+0.986609I$ $b=-0.050785+1.399520I$	$-18.0111-5.2978I$	0
$u=-0.303521+0.301278I$ $a=\ \ 1.018990-0.220898I$ $b=-0.312600-0.550494I$	$-0.201500+0.933792I$	$-4.38363-6.63917I$
$u=-0.303521-0.301278I$ $a=\ \ 1.018990+0.220898I$ $b=-0.312600+0.550494I$	$-0.201500-0.933792I$	$-4.38363+6.63917I$
$u=\ \ 0.278524$ $a=-2.80564$ $b=\ \ 0.551515$	-2.11486	-4.47090

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

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

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

$$a_7 = \begin{pmatrix} -u^4 + u^3 + u^2 - u \\ 0 \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} -u^4 + u^3 + u^2 - u \\ 0 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} u^2 - 1 \\ u^4 - 2u^2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^4 + u^3 - u + 1 \\ -u^4 + 2u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5u^3 - u^2 - 8u - 9$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.21774$ $a=-1.30408$ $b=0$	-4.04602	-9.76980
$u=-0.309916+0.549911I$ $a=0.428550-1.039280I$ $b=0$	$-1.97403+1.53058I$	$-5.05737-4.09764I$
$u=-0.309916-0.549911I$ $a=0.428550+1.039280I$ $b=0$	$-1.97403-1.53058I$	$-5.05737+4.09764I$
$u=1.41878+0.21917I$ $a=-0.276511-0.728237I$ $b=0$	$-7.51750-4.40083I$	$-9.05774+4.18967I$
$u=1.41878-0.21917I$ $a=-0.276511+0.728237I$ $b=0$	$-7.51750+4.40083I$	$-9.05774-4.18967I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^5(u^{77}+33u^{76}+\cdots-7680u-1024)$
c_2, c_7	$u^5(u^{77}+u^{76}+\cdots-96u-32)$
c_3, c_4	$(u^5-u^4-2u^3+u^2+u+1)(u^{77}+2u^{76}+\cdots-u-1)$
c_5, c_6	$((u-1)^5)(u^{77}-6u^{76}+\cdots+u-1)$
c_8	$((u+1)^5)(u^{77}-6u^{76}+\cdots+u-1)$
c_9	$(u^5-u^4+2u^3-u^2+u-1)(u^{77}+12u^{76}+\cdots+1689u+73)$
c_{10}	$(u^5-3u^4+4u^3-u^2-u+1)(u^{77}-6u^{76}+\cdots+813u-935)$
c_{11}	$(u^5+u^4-2u^3-u^2+u-1)(u^{77}+2u^{76}+\cdots-u-1)$
c_{12}	$(u^5+u^4+2u^3+u^2+u+1)(u^{77}+12u^{76}+\cdots+1689u+73)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^5(y^{77}+13y^{76}+\cdots+1.11411\times10^7y-1048576)$
c_2, c_7	$y^5(y^{77}+33y^{76}+\cdots-7680y-1024)$
c_3, c_4, c_{11}	$(y^5-5y^4+8y^3-3y^2-y-1)(y^{77}-72y^{76}+\cdots+7y-1)$
c_5, c_6, c_8	$((y-1)^5)(y^{77}-68y^{76}+\cdots-7y-1)$
c_9, c_{12}	$(y^5+3y^4+4y^3+y^2-y-1)(y^{77}+60y^{76}+\cdots+148363y-5329)$
c_{10}	$(y^5-y^4+8y^3-3y^2+3y-1)$ $\cdot(y^{77}-24y^{76}+\cdots+24711039y-874225)$