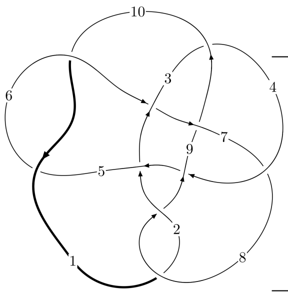
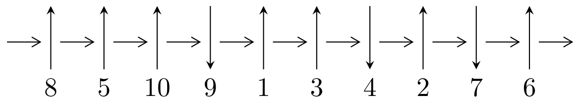
10_{117} ($K10a_{99}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -3.20848 \times 10^{161} u^{59} + 1.04355 \times 10^{162} u^{58} + \cdots + 3.99664 \times 10^{162} b - 4.01482 \times 10^{162}, \\ & 5.43983 \times 10^{162} u^{59} - 1.65350 \times 10^{163} u^{58} + \cdots + 3.75684 \times 10^{163} a + 6.18508 \times 10^{163}, \\ & u^{60} - 3u^{59} + \cdots - 100u - 47 \rangle \\ I_2^u = \langle & 2u^8 + u^7 - 2u^6 - 9u^5 - u^4 + u^3 - 10u^2 + 9b + 18u - 5, \\ & -8u^8 - 3u^7 - 9u^6 + 28u^5 - 21u^4 + 40u^3 - 29u^2 + 3a + u - 11, \\ & u^9 + u^7 - 4u^6 + 4u^5 - 6u^4 + 6u^3 - 2u^2 + 2u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 69 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. $\boldsymbol{I_1^u = \langle -3.21\times 10^{161}u^{59} + 1.04\times 10^{162}u^{58} + \cdots + 4.00\times 10^{162}b - 4.01\times 10^{162},\ 5.44\times 10^{162}u^{59} - 1.65\times 10^{163}u^{58} + \cdots + 3.76\times 10^{163}a + 6.19\times 10^{163},\ u^{60} - 3u^{59} + \cdots - 100u - 47\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-0.144798u^{59} + 0.440130u^{58} + \cdots + 27.2425u - 1.64635\\ 0.0802795u^{59} - 0.261107u^{58} + \cdots - 9.37588u + 1.00455\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-0.0645187u^{59} + 0.179024u^{58} + \cdots + 17.8666u - 0.641805\\ 0.0802795u^{59} - 0.261107u^{58} + \cdots - 9.37588u + 1.00455\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.149789u^{59} + 0.442542u^{58} + \cdots + 31.7281u - 0.963328\\ 0.0559636u^{59} - 0.178921u^{58} + \cdots - 6.13906u + 0.642242\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.0151173u^{59} - 0.0879877u^{58} + \cdots + 42.0887u + 12.0597\\ -0.0276044u^{59} + 0.0511785u^{58} + \cdots + 7.28332u + 2.39479\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0.200110u^{59} - 0.575603u^{58} + \cdots - 63.4707u + 3.83922\\ -0.0114669u^{59} + 0.0348903u^{58} + \cdots + 2.13595u - 0.466474\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.118992u^{59} + 0.283347u^{58} + \cdots + 73.3930u + 13.4060\\ 0.0307095u^{59} - 0.111236u^{58} + \cdots - 2.62950u + 1.31233\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0144334u^{59} - 0.0276837u^{58} + \cdots + 46.6833u + 14.8115\\ -0.00194635u^{59} + 0.00912555u^{58} + \cdots - 0.688771u + 0.357009\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0308620u^{59} + 0.236254u^{58} + \cdots - 40.3438u + 23.2477$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{60} - 16u^{58} + \cdots - 24u + 19$
c_2	$u^{60} - u^{59} + \cdots - 252u + 29$
c_3	$u^{60} - 3u^{59} + \cdots - 100u - 47$
c_4	$u^{60} + u^{59} + \cdots - 295u - 37$
c_5, c_{10}	$u^{60} + u^{59} + \cdots - 328u - 49$
c_6	$u^{60} + 5u^{58} + \cdots + 9u + 1$
c_7	$u^{60} + 2u^{59} + \cdots + 74u - 19$
c_9	$u^{60} - 3u^{59} + \cdots + 16u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{60} - 32y^{59} + \cdots - 1602y + 361$
c_2	$y^{60} - 5y^{59} + \cdots - 61300y + 841$
c_3	$y^{60} + 13y^{59} + \cdots + 47810y + 2209$
c_4	$y^{60} + 9y^{59} + \cdots - 29527y + 1369$
c_5, c_{10}	$y^{60} + 37y^{59} + \cdots + 42258y + 2401$
c_6	$y^{60} + 10y^{59} + \cdots - 45y + 1$
c_7	$y^{60} + 42y^{58} + \cdots - 7604y + 361$
c_9	$y^{60} + y^{59} + \cdots - 10y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.112870+0.986911I$ $a=-1.159810+0.114908I$ $b=\quad 0.540790+0.509640I$	$-3.10319-2.00739I$	$0.07017+3.73576I$
$u=-0.112870-0.986911I$ $a=-1.159810-0.114908I$ $b=\quad 0.540790-0.509640I$	$-3.10319+2.00739I$	$0.07017-3.73576I$
$u=\quad 0.758675+0.611167I$ $a=\quad 0.595748-0.212189I$ $b=-0.847394-0.210567I$	$1.45806+0.40357I$	$7.54100-1.19625I$
$u=\quad 0.758675-0.611167I$ $a=\quad 0.595748+0.212189I$ $b=-0.847394+0.210567I$	$1.45806-0.40357I$	$7.54100+1.19625I$
$u=\quad 0.791211+0.664753I$ $a=\quad 0.043324+0.264154I$ $b=\quad 0.005931-1.204400I$	$1.99327+4.92703I$	$6.26354-5.97246I$
$u=\quad 0.791211-0.664753I$ $a=\quad 0.043324-0.264154I$ $b=\quad 0.005931+1.204400I$	$1.99327-4.92703I$	$6.26354+5.97246I$
$u=-0.373335+0.846791I$ $a=-1.34189+0.46586I$ $b=\quad 1.36952-0.80230I$	$-3.50470-2.65606I$	$-0.26583+6.15253I$
$u=-0.373335-0.846791I$ $a=-1.34189-0.46586I$ $b=\quad 1.36952+0.80230I$	$-3.50470+2.65606I$	$-0.26583-6.15253I$
$u=-0.419068+0.994844I$ $a=-1.154120+0.418871I$ $b=\quad 0.479030-0.178046I$	$-3.24917-2.13718I$	$-0.66405+3.46334I$
$u=-0.419068-0.994844I$ $a=-1.154120-0.418871I$ $b=\quad 0.479030+0.178046I$	$-3.24917+2.13718I$	$-0.66405-3.46334I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.993764 + 0.432758I$ $a = -0.745249 - 0.914388I$ $b = 0.92399 + 1.46999I$	$1.75235 + 6.26871I$	$10.64174 - 5.67281I$
$u = 0.993764 - 0.432758I$ $a = -0.745249 + 0.914388I$ $b = 0.92399 - 1.46999I$	$1.75235 - 6.26871I$	$10.64174 + 5.67281I$
$u = 0.906827$ $a = 0.722755$ $b = -0.514151$	1.17963	9.59750
$u = 0.286214 + 0.854751I$ $a = 1.69970 - 0.17441I$ $b = -0.441193 - 1.061620I$	$-1.94749 + 7.99248I$	$0.63462 - 7.50100I$
$u = 0.286214 - 0.854751I$ $a = 1.69970 + 0.17441I$ $b = -0.441193 + 1.061620I$	$-1.94749 - 7.99248I$	$0.63462 + 7.50100I$
$u = 0.693182 + 0.924086I$ $a = -0.459390 + 0.604795I$ $b = 0.843186 + 0.654005I$	$0.60848 + 4.96181I$	$4.00000 - 6.29782I$
$u = 0.693182 - 0.924086I$ $a = -0.459390 - 0.604795I$ $b = 0.843186 - 0.654005I$	$0.60848 - 4.96181I$	$4.00000 + 6.29782I$
$u = -0.538025 + 0.635820I$ $a = 0.059477 + 0.601315I$ $b = -0.031984 + 0.666688I$	$-1.41050 - 1.53960I$	$-1.08247 + 1.71398I$
$u = -0.538025 - 0.635820I$ $a = 0.059477 - 0.601315I$ $b = -0.031984 - 0.666688I$	$-1.41050 + 1.53960I$	$-1.08247 - 1.71398I$
$u = -0.208530 + 0.777299I$ $a = 1.54929 + 0.19094I$ $b = -0.173386 + 1.263770I$	$-4.80506 - 1.60983I$	$-3.59396 + 7.39228I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.208530 - 0.777299I$ $a = 1.54929 - 0.19094I$ $b = -0.173386 - 1.263770I$	$-4.80506 + 1.60983I$	$-3.59396 - 7.39228I$
$u = 0.824128 + 0.877490I$ $a = 0.878482 + 0.225172I$ $b = -0.96089 - 1.31598I$	$3.14073 + 5.21448I$	0
$u = 0.824128 - 0.877490I$ $a = 0.878482 - 0.225172I$ $b = -0.96089 + 1.31598I$	$3.14073 - 5.21448I$	0
$u = -0.521047 + 0.599991I$ $a = -0.246524 - 1.324130I$ $b = 0.819658 - 0.613048I$	$4.56427 + 0.06184I$	$9.79376 + 2.89093I$
$u = -0.521047 - 0.599991I$ $a = -0.246524 + 1.324130I$ $b = 0.819658 + 0.613048I$	$4.56427 - 0.06184I$	$9.79376 - 2.89093I$
$u = -0.911068 + 0.857587I$ $a = -0.800663 - 0.622002I$ $b = 0.887791 - 0.659627I$	$4.45627 - 9.81230I$	0
$u = -0.911068 - 0.857587I$ $a = -0.800663 + 0.622002I$ $b = 0.887791 + 0.659627I$	$4.45627 + 9.81230I$	0
$u = 0.520353 + 0.534999I$ $a = 1.60615 - 0.69113I$ $b = -0.244986 - 0.494041I$	$1.62697 - 0.89360I$	$2.00328 - 3.90798I$
$u = 0.520353 - 0.534999I$ $a = 1.60615 + 0.69113I$ $b = -0.244986 + 0.494041I$	$1.62697 + 0.89360I$	$2.00328 + 3.90798I$
$u = -1.242100 + 0.227160I$ $a = -0.033020 - 0.829489I$ $b = 0.352953 + 0.262356I$	$-0.86533 + 2.68701I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.242100 - 0.227160I$ $a = -0.033020 + 0.829489I$ $b = 0.352953 - 0.262356I$	$-0.86533 - 2.68701I$	0
$u = -0.282250 + 0.670079I$ $a = 1.37086 - 0.50401I$ $b = -0.81149 + 1.93630I$	$-4.32803 - 0.39404I$	$-0.42763 - 3.09033I$
$u = -0.282250 - 0.670079I$ $a = 1.37086 + 0.50401I$ $b = -0.81149 - 1.93630I$	$-4.32803 + 0.39404I$	$-0.42763 + 3.09033I$
$u = 0.775420 + 1.016880I$ $a = 0.283940 + 0.475986I$ $b = 0.385422 - 0.306091I$	$2.81417 + 0.85474I$	0
$u = 0.775420 - 1.016880I$ $a = 0.283940 - 0.475986I$ $b = 0.385422 + 0.306091I$	$2.81417 - 0.85474I$	0
$u = -0.654495 + 0.222235I$ $a = 0.913613 + 0.492134I$ $b = -1.171170 + 0.662981I$	$5.22239 - 2.37989I$	$14.0342 + 3.0404I$
$u = -0.654495 - 0.222235I$ $a = 0.913613 - 0.492134I$ $b = -1.171170 - 0.662981I$	$5.22239 + 2.37989I$	$14.0342 - 3.0404I$
$u = 0.008423 + 0.554656I$ $a = 2.05543 + 0.36150I$ $b = -1.23945 - 1.72511I$	$-0.66314 - 6.63784I$	$-0.93799 + 7.96550I$
$u = 0.008423 - 0.554656I$ $a = 2.05543 - 0.36150I$ $b = -1.23945 + 1.72511I$	$-0.66314 + 6.63784I$	$-0.93799 - 7.96550I$
$u = -0.82689 + 1.22977I$ $a = 0.911137 - 0.237809I$ $b = -1.19326 + 1.23882I$	$-3.51043 - 9.84939I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.82689 - 1.22977I$ $a = 0.911137 + 0.237809I$ $b = -1.19326 - 1.23882I$	$-3.51043 + 9.84939I$	0
$u = -0.81360 + 1.26582I$ $a = -0.915368 + 0.302763I$ $b = 0.929673 - 0.916332I$	$-4.28857 - 3.85212I$	0
$u = -0.81360 - 1.26582I$ $a = -0.915368 - 0.302763I$ $b = 0.929673 + 0.916332I$	$-4.28857 + 3.85212I$	0
$u = -0.469315$ $a = 5.77453$ $b = -0.184074$	-0.389771	203.390
$u = -0.07505 + 1.52982I$ $a = 0.651890 + 0.069835I$ $b = -1.327120 - 0.173804I$	$2.01747 - 2.78040I$	0
$u = -0.07505 - 1.52982I$ $a = 0.651890 - 0.069835I$ $b = -1.327120 + 0.173804I$	$2.01747 + 2.78040I$	0
$u = -0.93774 + 1.26399I$ $a = 0.536599 + 0.151412I$ $b = -0.870982 - 0.095094I$	$3.61034 + 3.01624I$	0
$u = -0.93774 - 1.26399I$ $a = 0.536599 - 0.151412I$ $b = -0.870982 + 0.095094I$	$3.61034 - 3.01624I$	0
$u = 0.047283 + 0.408643I$ $a = -4.41257 - 0.03304I$ $b = 0.656591 - 0.103431I$	$-0.647397 + 0.825379I$	$13.47557 + 3.84496I$
$u = 0.047283 - 0.408643I$ $a = -4.41257 + 0.03304I$ $b = 0.656591 + 0.103431I$	$-0.647397 - 0.825379I$	$13.47557 - 3.84496I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.96616 + 1.29625I$ $a = 0.917595 + 0.250498I$ $b = -1.16052 - 1.17459I$	$-0.3709 + 16.1254I$	0
$u = 0.96616 - 1.29625I$ $a = 0.917595 - 0.250498I$ $b = -1.16052 + 1.17459I$	$-0.3709 - 16.1254I$	0
$u = 0.92727 + 1.34544I$ $a = -0.868668 - 0.126514I$ $b = 0.891724 + 0.853255I$	$-3.18307 + 7.41862I$	0
$u = 0.92727 - 1.34544I$ $a = -0.868668 + 0.126514I$ $b = 0.891724 - 0.853255I$	$-3.18307 - 7.41862I$	0
$u = -1.23044 + 1.25774I$ $a = -0.588762 + 0.477885I$ $b = 0.728116 - 1.050760I$	$-2.92948 - 5.60961I$	0
$u = -1.23044 - 1.25774I$ $a = -0.588762 - 0.477885I$ $b = 0.728116 + 1.050760I$	$-2.92948 + 5.60961I$	0
$u = 1.02141 + 1.47167I$ $a = -0.494856 - 0.297340I$ $b = 0.694021 + 0.906910I$	$-2.63315 + 3.07819I$	0
$u = 1.02141 - 1.47167I$ $a = -0.494856 + 0.297340I$ $b = 0.694021 - 0.906910I$	$-2.63315 - 3.07819I$	0
$u = 1.81425 + 0.48435I$ $a = -0.069087 + 0.592288I$ $b = 0.314536 - 0.264463I$	$2.02262 - 7.30145I$	0
$u = 1.81425 - 0.48435I$ $a = -0.069087 - 0.592288I$ $b = 0.314536 + 0.264463I$	$2.02262 + 7.30145I$	0

II.

$\boldsymbol{I_2^u = \langle 2u^8+u^7+\cdots+9b-5,\ -8u^8-3u^7+\cdots+3a-11,\ u^9+u^7+\cdots+2u-1\rangle}$

(i) Arc colorings

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

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

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

$$a_6 = \begin{pmatrix}\frac{8}{3}u^8+u^7+\cdots-\frac{1}{3}u+\frac{11}{3}\\-\frac{2}{9}u^8-\frac{1}{9}u^7+\cdots-2u+\frac{5}{9}\end{pmatrix}$$

$$a_7 = \begin{pmatrix}\frac{22}{9}u^8+\frac{8}{9}u^7+\cdots-\frac{7}{3}u+\frac{38}{9}\\-\frac{2}{9}u^8-\frac{1}{9}u^7+\cdots-2u+\frac{5}{9}\end{pmatrix}$$

$$a_8 = \begin{pmatrix}\frac{17}{9}u^8+\frac{4}{9}u^7+\cdots-u+\frac{25}{9}\\\frac{1}{3}u^8+\frac{1}{3}u^7+\cdots-\frac{7}{3}u+1\end{pmatrix}$$

$$a_1 = \begin{pmatrix}\frac{46}{9}u^8+\frac{29}{9}u^7+\cdots+\frac{5}{3}u+\frac{77}{9}\\\frac{1}{9}u^8-\frac{7}{9}u^7+\cdots-\frac{1}{3}u-\frac{4}{9}\end{pmatrix}$$

$$a_5 = \begin{pmatrix}\frac{119}{9}u^8+\frac{64}{9}u^7+\cdots-u+\frac{229}{9}\\\frac{1}{3}u^8+\frac{1}{3}u^7+\cdots+\frac{1}{3}u^2+\frac{2}{3}u\end{pmatrix}$$

$$a_2 = \begin{pmatrix}\frac{32}{9}u^8+\frac{16}{9}u^7+\cdots-u+\frac{64}{9}\\\frac{2}{9}u^8+\frac{1}{9}u^7+\cdots-u+\frac{4}{9}\end{pmatrix}$$

$$a_9 = \begin{pmatrix}\frac{46}{9}u^8+\frac{17}{9}u^7+\cdots-\frac{8}{3}u+\frac{80}{9}\\-\frac{1}{9}u^8-\frac{5}{9}u^7+\cdots-2u+\frac{7}{9}\end{pmatrix}$$

(ii) Obstruction class $=1$

(iii) Cusp Shapes
$= -\frac{454}{9}u^8-\frac{245}{9}u^7-\frac{599}{9}u^6+166u^5-\frac{1024}{9}u^4+\frac{2203}{9}u^3-\frac{1618}{9}u^2+13u-\frac{845}{9}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9 + u^8 - u^7 - u^6 - u^5 - u^4 + 4u^3 + 2u^2 - 2u - 1$
c_2	$u^9 + 4u^8 + 10u^7 + 20u^6 + 34u^5 + 42u^4 + 30u^3 + 9u^2 - 1$
c_3	$u^9 + u^7 - 4u^6 + 4u^5 - 6u^4 + 6u^3 - 2u^2 + 2u - 1$
c_4	$u^9 - 2u^8 - u^7 - 3u^6 - 3u^5 - 5u^3 - 4u^2 - u - 1$
c_5	$u^9 - 2u^8 + 3u^7 - 7u^6 + u^5 - 10u^4 - 4u^3 - 6u^2 - 4u - 1$
c_6	$u^9 + u^8 + 4u^7 - u^6 + u^5 - 8u^4 - 3u^2 + 7u - 1$
c_7	$u^9 - u^8 + 3u^7 + u^6 + u^5 + 3u^4 + 3u^3 + 5u^2 + 1$
c_8	$u^9 - u^8 - u^7 + u^6 - u^5 + u^4 + 4u^3 - 2u^2 - 2u + 1$
c_9	$u^9 + 4u^8 + 5u^7 + 3u^6 + 2u^5 + 2u^4 + u^3 + 1$
c_{10}	$u^9 + 2u^8 + 3u^7 + 7u^6 + u^5 + 10u^4 - 4u^3 + 6u^2 - 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^9 - 3y^8 + y^7 + 11y^6 - 17y^5 + y^4 + 22y^3 - 22y^2 + 8y - 1$
c_2	$y^9 + 4y^8 + 8y^7 + 4y^6 + 4y^5 - 76y^4 + 184y^3 + 3y^2 + 18y - 1$
c_3	$y^9 + 2y^8 + 9y^7 + 4y^6 - 16y^5 + 20y^3 + 8y^2 - 1$
c_4	$y^9 - 6y^8 - 17y^7 - 13y^6 + y^5 + 4y^4 + 25y^3 - 6y^2 - 7y - 1$
c_5, c_{10}	$y^9 + 2y^8 - 17y^7 - 91y^6 - 195y^5 - 220y^4 - 126y^3 - 24y^2 + 4y - 1$
c_6	$y^9 + 7y^8 + 20y^7 + 23y^6 + 5y^5 - 12y^4 - 36y^3 - 25y^2 + 43y - 1$
c_7	$y^9 + 5y^8 + 13y^7 + 17y^6 + 23y^5 - 11y^4 - 23y^3 - 31y^2 - 10y - 1$
c_9	$y^9 - 6y^8 + 5y^7 - 3y^6 + 2y^5 - 8y^4 - 5y^3 - 4y^2 - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.055585 + 1.071070I$ $a = 0.151372 + 0.325268I$ $b = -0.911604 - 0.103130I$	$3.57395 + 1.78451I$	$10.19091 - 0.99326I$
$u = 0.055585 - 1.071070I$ $a = 0.151372 - 0.325268I$ $b = -0.911604 + 0.103130I$	$3.57395 - 1.78451I$	$10.19091 + 0.99326I$
$u = 1.040640 + 0.285855I$ $a = -0.561905 - 0.895180I$ $b = 0.161935 + 1.373030I$	$0.72688 + 6.70635I$	$3.06894 - 7.87674I$
$u = 1.040640 - 0.285855I$ $a = -0.561905 + 0.895180I$ $b = 0.161935 - 1.373030I$	$0.72688 - 6.70635I$	$3.06894 + 7.87674I$
$u = -0.244831 + 0.626842I$ $a = -1.67953 + 0.25795I$ $b = 0.53282 - 1.62052I$	$-4.15988 - 1.15529I$	$3.41918 + 3.86401I$
$u = -0.244831 - 0.626842I$ $a = -1.67953 - 0.25795I$ $b = 0.53282 + 1.62052I$	$-4.15988 + 1.15529I$	$3.41918 - 3.86401I$
$u = 0.524555$ $a = 4.47522$ $b = -0.153592$	-0.416370	-105.200
$u = -1.11367 + 1.37911I$ $a = -0.647547 + 0.344854I$ $b = 0.793645 - 0.872272I$	$-3.22264 - 4.71392I$	$2.42181 + 4.00779I$
$u = -1.11367 - 1.37911I$ $a = -0.647547 - 0.344854I$ $b = 0.793645 + 0.872272I$	$-3.22264 + 4.71392I$	$2.42181 - 4.00779I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^9+u^8-u^7-u^6-u^5-u^4+4u^3+2u^2-2u-1)$ $\cdot(u^{60}-16u^{58}+\cdots-24u+19)$
c_2	$(u^9+4u^8+10u^7+20u^6+34u^5+42u^4+30u^3+9u^2-1)$ $\cdot(u^{60}-u^{59}+\cdots-252u+29)$
c_3	$(u^9+u^7-4u^6+4u^5-6u^4+6u^3-2u^2+2u-1)$ $\cdot(u^{60}-3u^{59}+\cdots-100u-47)$
c_4	$(u^9-2u^8-u^7-3u^6-3u^5-5u^3-4u^2-u-1)$ $\cdot(u^{60}+u^{59}+\cdots-295u-37)$
c_5	$(u^9-2u^8+3u^7-7u^6+u^5-10u^4-4u^3-6u^2-4u-1)$ $\cdot(u^{60}+u^{59}+\cdots-328u-49)$
c_6	$(u^9+u^8+\cdots+7u-1)(u^{60}+5u^{58}+\cdots+9u+1)$
c_7	$(u^9-u^8+3u^7+u^6+u^5+3u^4+3u^3+5u^2+1)$ $\cdot(u^{60}+2u^{59}+\cdots+74u-19)$
c_8	$(u^9-u^8-u^7+u^6-u^5+u^4+4u^3-2u^2-2u+1)$ $\cdot(u^{60}-16u^{58}+\cdots-24u+19)$
c_9	$(u^9+4u^8+\cdots+u^3+1)(u^{60}-3u^{59}+\cdots+16u-1)$
c_{10}	$(u^9+2u^8+3u^7+7u^6+u^5+10u^4-4u^3+6u^2-4u+1)$ $\cdot(u^{60}+u^{59}+\cdots-328u-49)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y^9 - 3y^8 + y^7 + 11y^6 - 17y^5 + y^4 + 22y^3 - 22y^2 + 8y - 1)$ $\cdot (y^{60} - 32y^{59} + \cdots - 1602y + 361)$
c_2	$(y^9 + 4y^8 + 8y^7 + 4y^6 + 4y^5 - 76y^4 + 184y^3 + 3y^2 + 18y - 1)$ $\cdot (y^{60} - 5y^{59} + \cdots - 61300y + 841)$
c_3	$(y^9 + 2y^8 + 9y^7 + 4y^6 - 16y^5 + 20y^3 + 8y^2 - 1)$ $\cdot (y^{60} + 13y^{59} + \cdots + 47810y + 2209)$
c_4	$(y^9 - 6y^8 - 17y^7 - 13y^6 + y^5 + 4y^4 + 25y^3 - 6y^2 - 7y - 1)$ $\cdot (y^{60} + 9y^{59} + \cdots - 29527y + 1369)$
c_5, c_{10}	$(y^9 + 2y^8 - 17y^7 - 91y^6 - 195y^5 - 220y^4 - 126y^3 - 24y^2 + 4y - 1)$ $\cdot (y^{60} + 37y^{59} + \cdots + 42258y + 2401)$
c_6	$(y^9 + 7y^8 + 20y^7 + 23y^6 + 5y^5 - 12y^4 - 36y^3 - 25y^2 + 43y - 1)$ $\cdot (y^{60} + 10y^{59} + \cdots - 45y + 1)$
c_7	$(y^9 + 5y^8 + 13y^7 + 17y^6 + 23y^5 - 11y^4 - 23y^3 - 31y^2 - 10y - 1)$ $\cdot (y^{60} + 42y^{58} + \cdots - 7604y + 361)$
c_9	$(y^9 - 6y^8 + 5y^7 - 3y^6 + 2y^5 - 8y^4 - 5y^3 - 4y^2 - 1)$ $\cdot (y^{60} + y^{59} + \cdots - 10y + 1)$