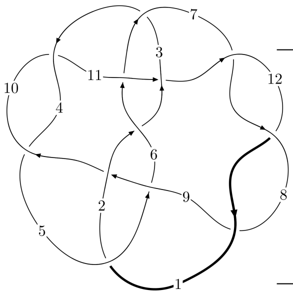
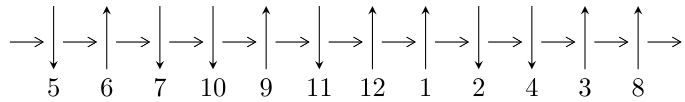
$12a_{1216}$ ($K12a_{1216}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 = \langle &3.07110 \times 10^{55}u^{35} + 3.11578 \times 10^{55}u^{34} + \cdots + 1.21007 \times 10^{57}b - 2.38367 \times 10^{57},\\
&- 3.06823 \times 10^{57}u^{35} - 8.48330 \times 10^{57}u^{34} + \cdots + 2.92837 \times 10^{58}a - 3.15010 \times 10^{57},\\
&u^{36} + 3u^{35} + \cdots + 31u + 11\rangle\\
I^u_2 = \langle &1.96215 \times 10^{378}u^{83} - 5.73830 \times 10^{378}u^{82} + \cdots + 2.31304 \times 10^{381}b + 1.14245 \times 10^{383},\\
&- 2.55618 \times 10^{383}u^{83} + 1.36720 \times 10^{384}u^{82} + \cdots + 3.72608 \times 10^{385}a - 4.36737 \times 10^{387},\\
&u^{84} - 6u^{83} + \cdots + 75402u + 16109\rangle\\
I^u_3 = \langle &-1.41646 \times 10^{18}u^{23} - 1.09158 \times 10^{19}u^{22} + \cdots + 9.42892 \times 10^{19}b - 2.23684 \times 10^{20},\\
&- 2.41868 \times 10^{19}u^{23} - 2.30045 \times 10^{19}u^{22} + \cdots + 3.45727 \times 10^{20}a + 9.65371 \times 10^{20},\\
&u^{24} + u^{23} + \cdots - 44u + 11\rangle\\
I^u_4 = \langle &-u^2 + b + u - 1,\ u^3 - u^2 + a + 2u,\ u^5 - u^4 + 3u^3 + u + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 149 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. $\boldsymbol{I_1^u = \langle 3.07 \times 10^{55} u^{35} + 3.12 \times 10^{55} u^{34} + \cdots + 1.21 \times 10^{57} b - 2.38 \times 10^{57},\ -3.07 \times 10^{57} u^{35} - 8.48 \times 10^{57} u^{34} + \cdots + 2.93 \times 10^{58} a - 3.15 \times 10^{57},\ u^{36} + 3u^{35} + \cdots + 31u + 11 \rangle}$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} 0.104776u^{35} + 0.289694u^{34} + \cdots + 8.06655u + 0.107572 \\ -0.0253796u^{35} - 0.0257488u^{34} + \cdots + 2.33690u + 1.96987 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0430439u^{35} - 0.0980154u^{34} + \cdots - 1.26891u + 1.90110 \\ -0.0282150u^{35} - 0.0943192u^{34} + \cdots - 1.90756u - 0.940844 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0194838u^{35} + 0.0845787u^{34} + \cdots + 2.21756u + 2.39922 \\ -0.00642062u^{35} - 0.0145250u^{34} + \cdots - 0.611763u - 0.128826 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.119201u^{35} + 0.286732u^{34} + \cdots + 5.34079u - 1.59131 \\ -0.0176093u^{35} + 0.0122805u^{34} + \cdots + 3.61154u + 2.47846 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0321006u^{35} - 0.0871705u^{34} + \cdots + 1.07521u + 2.34185 \\ 0.0515844u^{35} + 0.171749u^{34} + \cdots + 1.14236u + 0.0573708 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.130156u^{35} + 0.315443u^{34} + \cdots + 5.72965u - 1.86229 \\ -0.0253796u^{35} - 0.0257488u^{34} + \cdots + 2.33690u + 1.96987 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0218056u^{35} + 0.0861969u^{34} + \cdots + 5.45506u + 0.366809 \\ 0.0637256u^{35} + 0.142182u^{34} + \cdots + 0.735110u + 0.377098 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00521553u^{35} + 0.0359378u^{34} + \cdots + 6.08640u + 0.980678 \\ 0.0169269u^{35} - 0.00722416u^{34} + \cdots - 4.32230u - 1.22939 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0405255u^{35} - 0.0987638u^{34} + \cdots - 0.0270432u - 1.57349 \\ 0.0588225u^{35} + 0.139014u^{34} + \cdots + 1.58649u + 0.520172 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.343599u^{35} + 0.938842u^{34} + \cdots + 7.99255u + 3.25096$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{36} - 3u^{35} + \cdots - 31u + 11$
c_2	$u^{36} - 7u^{35} + \cdots - 12071u + 1268$
c_4, c_{10}	$11(11u^{36} - 27u^{35} + \cdots - 224u + 64)$
c_5, c_{11}	$11(11u^{36} - 5u^{35} + \cdots + 11u + 1)$
c_6, c_9	$u^{36} + u^{35} + \cdots + 17u + 11$
c_7, c_8, c_{12}	$u^{36} + 4u^{35} + \cdots - 71u + 28$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{36} + 17y^{35} + \cdots + 1525y + 121$
c_2	$y^{36} - 5y^{35} + \cdots - 32055665y + 1607824$
c_4, c_{10}	$121(121y^{36} + 4177y^{35} + \cdots - 52224y + 4096)$
c_5, c_{11}	$121(121y^{36} - 179y^{35} + \cdots - 15y + 1)$
c_6, c_9	$y^{36} - 9y^{35} + \cdots - 993y + 121$
c_7, c_8, c_{12}	$y^{36} - 42y^{35} + \cdots - 10025y + 784$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.626439 + 0.821744I$ $a = -0.014200 + 0.915314I$ $b = 0.285946 + 1.359990I$	$5.67717 - 7.19089I$	$6.77872 + 10.51894I$
$u = 0.626439 - 0.821744I$ $a = -0.014200 - 0.915314I$ $b = 0.285946 - 1.359990I$	$5.67717 + 7.19089I$	$6.77872 - 10.51894I$
$u = -0.735513 + 0.847069I$ $a = -0.061617 - 1.306230I$ $b = -0.731247 - 0.579536I$	$1.25199 + 9.16761I$	$2.00321 - 10.89319I$
$u = -0.735513 - 0.847069I$ $a = -0.061617 + 1.306230I$ $b = -0.731247 + 0.579536I$	$1.25199 - 9.16761I$	$2.00321 + 10.89319I$
$u = 0.772732 + 0.874210I$ $a = 0.194851 + 0.728325I$ $b = -0.486450 + 0.481309I$	$-1.16285 - 3.35532I$	$-5.76129 + 8.10680I$
$u = 0.772732 - 0.874210I$ $a = 0.194851 - 0.728325I$ $b = -0.486450 - 0.481309I$	$-1.16285 + 3.35532I$	$-5.76129 - 8.10680I$
$u = -0.805692 + 0.116635I$ $a = 0.617278 - 1.109470I$ $b = 0.337006 - 0.262138I$	$2.93111 - 1.00501I$	$-2.25229 + 5.18116I$
$u = -0.805692 - 0.116635I$ $a = 0.617278 + 1.109470I$ $b = 0.337006 + 0.262138I$	$2.93111 + 1.00501I$	$-2.25229 - 5.18116I$
$u = -0.165485 + 0.766453I$ $a = 1.42439 - 0.22806I$ $b = -1.69610 + 0.07451I$	$11.30080 + 0.97216I$	$1.38322 - 7.38671I$
$u = -0.165485 - 0.766453I$ $a = 1.42439 + 0.22806I$ $b = -1.69610 - 0.07451I$	$11.30080 - 0.97216I$	$1.38322 + 7.38671I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.696880 + 0.295020I$ $a = 0.096744 - 0.480185I$ $b = -0.400914 - 0.336417I$	$-1.319370 - 0.296330I$	$-6.81999 - 0.16370I$
$u = 0.696880 - 0.295020I$ $a = 0.096744 + 0.480185I$ $b = -0.400914 + 0.336417I$	$-1.319370 + 0.296330I$	$-6.81999 + 0.16370I$
$u = -0.737714 + 1.001740I$ $a = -0.073548 - 0.249450I$ $b = 0.589463 - 0.458452I$	$2.89931 + 3.69822I$	$0.38877 - 1.68665I$
$u = -0.737714 - 1.001740I$ $a = -0.073548 + 0.249450I$ $b = 0.589463 + 0.458452I$	$2.89931 - 3.69822I$	$0.38877 + 1.68665I$
$u = -0.405498 + 0.604340I$ $a = -0.253574 + 1.341290I$ $b = -0.285857 + 0.818526I$	$-0.18794 + 4.61110I$	$-1.49697 - 10.53385I$
$u = -0.405498 - 0.604340I$ $a = -0.253574 - 1.341290I$ $b = -0.285857 - 0.818526I$	$-0.18794 - 4.61110I$	$-1.49697 + 10.53385I$
$u = -0.018649 + 0.720074I$ $a = 0.212930 - 0.920994I$ $b = -2.00932 - 0.41237I$	$12.86020 + 1.02559I$	$15.7606 - 6.4698I$
$u = -0.018649 - 0.720074I$ $a = 0.212930 + 0.920994I$ $b = -2.00932 + 0.41237I$	$12.86020 - 1.02559I$	$15.7606 + 6.4698I$
$u = 0.570273 + 0.403483I$ $a = 0.797604 - 0.529762I$ $b = 1.71444 - 0.17611I$	$6.75055 - 0.27364I$	$3.68665 + 13.40425I$
$u = 0.570273 - 0.403483I$ $a = 0.797604 + 0.529762I$ $b = 1.71444 + 0.17611I$	$6.75055 + 0.27364I$	$3.68665 - 13.40425I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.896164+1.034610I$ $a=\ \ 0.190031+1.352920I$ $b=\ \ 1.62048+0.16576I$	$9.2208+11.9404I$	$5.14110-9.30022I$
$u=-0.896164-1.034610I$ $a=\ \ 0.190031-1.352920I$ $b=\ \ 1.62048-0.16576I$	$9.2208-11.9404I$	$5.14110+9.30022I$
$u=-1.379280+0.100054I$ $a=-0.551599+0.192022I$ $b=-1.48860-0.03556I$	$8.76113-1.33737I$	$5.81278+5.28943I$
$u=-1.379280-0.100054I$ $a=-0.551599-0.192022I$ $b=-1.48860+0.03556I$	$8.76113+1.33737I$	$5.81278-5.28943I$
$u=\ \ 0.85971+1.17187I$ $a=-0.049347-0.951517I$ $b=\ \ 0.903388-0.869869I$	$7.7128-14.1526I$	$5.37015+9.64601I$
$u=\ \ 0.85971-1.17187I$ $a=-0.049347+0.951517I$ $b=\ \ 0.903388+0.869869I$	$7.7128+14.1526I$	$5.37015-9.64601I$
$u=-0.156302+0.359262I$ $a=-0.90151+1.91392I$ $b=\ \ 0.858883+0.215221I$	$1.63286+0.71455I$	$2.07561-1.46762I$
$u=-0.156302-0.359262I$ $a=-0.90151-1.91392I$ $b=\ \ 0.858883-0.215221I$	$1.63286-0.71455I$	$2.07561+1.46762I$
$u=\ \ 0.77773+1.43937I$ $a=-0.327351-0.665051I$ $b=\ \ 1.51996-0.13931I$	$5.50525-5.57144I$	0
$u=\ \ 0.77773-1.43937I$ $a=-0.327351+0.665051I$ $b=\ \ 1.51996+0.13931I$	$5.50525+5.57144I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.91981 + 1.44541I$ $a = 0.083609 + 0.983332I$ $b = -1.68386 + 0.26413I$	$16.3072 - 18.5095I$	0
$u = 0.91981 - 1.44541I$ $a = 0.083609 - 0.983332I$ $b = -1.68386 - 0.26413I$	$16.3072 + 18.5095I$	0
$u = -0.71477 + 1.57778I$ $a = -0.255474 + 0.443114I$ $b = 0.529759 + 0.323204I$	$2.68916 + 6.34722I$	0
$u = -0.71477 - 1.57778I$ $a = -0.255474 - 0.443114I$ $b = 0.529759 - 0.323204I$	$2.68916 - 6.34722I$	0
$u = -0.70851 + 2.00785I$ $a = 0.374916 - 0.443328I$ $b = -1.57698 - 0.08807I$	$9.97824 + 7.80433I$	0
$u = -0.70851 - 2.00785I$ $a = 0.374916 + 0.443328I$ $b = -1.57698 + 0.08807I$	$9.97824 - 7.80433I$	0

II. $\boldsymbol{I^u_2 = \langle 1.96 \times 10^{378} u^{83} - 5.74 \times 10^{378} u^{82} + \cdots + 2.31 \times 10^{381} b + 1.14 \times 10^{383},\ -2.56 \times 10^{383} u^{83} + 1.37 \times 10^{384} u^{82} + \cdots + 3.73 \times 10^{385} a - 4.37 \times 10^{387},\ u^{84} - 6u^{83} + \cdots + 75402u + 16109 \rangle}$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} 0.00686023u^{83} - 0.0366927u^{82} + \cdots + 770.784u + 117.211 \\ -0.000848300u^{83} + 0.00248085u^{82} + \cdots - 242.928u - 49.3918 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0168256u^{83} + 0.122202u^{82} + \cdots + 1670.97u + 450.926 \\ 0.00649536u^{83} - 0.0484208u^{82} + \cdots - 918.996u - 236.276 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0354912u^{83} - 0.232975u^{82} + \cdots - 748.044u - 335.703 \\ -0.0188856u^{83} + 0.133648u^{82} + \cdots + 1425.41u + 406.752 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.00459288u^{83} - 0.0233944u^{82} + \cdots + 566.251u + 94.6163 \\ -0.000548050u^{83} + 0.000304096u^{82} + \cdots - 183.346u - 44.4657 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0108581u^{83} + 0.0775995u^{82} + \cdots + 1106.74u + 294.456 \\ 0.00419775u^{83} - 0.0306150u^{82} + \cdots - 609.826u - 150.118 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.00770853u^{83} - 0.0391735u^{82} + \cdots + 1013.71u + 166.603 \\ -0.000848300u^{83} + 0.00248085u^{82} + \cdots - 242.928u - 49.3918 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0217802u^{83} - 0.121456u^{82} + \cdots + 1657.93u + 239.097 \\ -0.00711285u^{83} + 0.0399474u^{82} + \cdots - 415.961u - 52.1460 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.0111339u^{83} + 0.0504405u^{82} + \cdots - 2063.90u - 380.414 \\ 0.00551466u^{83} - 0.0250079u^{82} + \cdots + 1064.17u + 192.856 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0165383u^{83} + 0.0810880u^{82} + \cdots - 2538.50u - 468.124 \\ 0.0147464u^{83} - 0.0845715u^{82} + \cdots + 1055.87u + 156.995 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.0487492u^{83} - 0.270054u^{82} + \cdots + 2871.27u + 426.180$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{84} + 6u^{83} + \cdots - 75402u + 16109$
c_2	$(u^{42} + 7u^{41} + \cdots + 3649u + 1139)^2$
c_4, c_{10}	$(u^{42} + u^{41} + \cdots - 42u + 11)^2$
c_5, c_{11}	$u^{84} - 21u^{82} + \cdots - 44416u + 6119$
c_6, c_9	$u^{84} - u^{83} + \cdots - 2672u + 2143$
c_7, c_8, c_{12}	$(u^{42} - 2u^{41} + \cdots + 22u + 19)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{84} + 32y^{83} + \cdots + 5914049372y + 259499881$
c_2	$(y^{42} - 41y^{41} + \cdots + 6170811y + 1297321)^2$
c_4, c_{10}	$(y^{42} + 39y^{41} + \cdots - 5570y + 121)^2$
c_5, c_{11}	$y^{84} - 42y^{83} + \cdots - 2518510190y + 37442161$
c_6, c_9	$y^{84} + 33y^{83} + \cdots + 197735502y + 4592449$
c_7, c_8, c_{12}	$(y^{42} - 50y^{41} + \cdots - 7704y + 361)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.412080 + 0.913638I$ $a = 0.263346 + 1.103990I$ $b = -0.437900 + 0.497668I$	$6.35842 + 3.57446I$	0
$u = -0.412080 - 0.913638I$ $a = 0.263346 - 1.103990I$ $b = -0.437900 - 0.497668I$	$6.35842 - 3.57446I$	0
$u = -0.088801 + 0.946124I$ $a = 1.47719 - 1.37886I$ $b = -1.62572 + 0.17083I$	$13.87510 - 0.52912I$	0
$u = -0.088801 - 0.946124I$ $a = 1.47719 + 1.37886I$ $b = -1.62572 - 0.17083I$	$13.87510 + 0.52912I$	0
$u = 0.325109 + 1.007640I$ $a = 0.544570 + 1.150320I$ $b = -0.549752 + 0.104184I$	$1.71215 - 3.87199I$	0
$u = 0.325109 - 1.007640I$ $a = 0.544570 - 1.150320I$ $b = -0.549752 - 0.104184I$	$1.71215 + 3.87199I$	0
$u = 0.691646 + 0.804712I$ $a = -0.000664 - 0.793299I$ $b = 0.066574 - 0.604668I$	$-1.43965 - 2.16802I$	0
$u = 0.691646 - 0.804712I$ $a = -0.000664 + 0.793299I$ $b = 0.066574 + 0.604668I$	$-1.43965 + 2.16802I$	0
$u = 0.759609 + 0.743113I$ $a = -0.65385 + 1.91886I$ $b = -1.58084$	8.77057	0
$u = 0.759609 - 0.743113I$ $a = -0.65385 - 1.91886I$ $b = -1.58084$	8.77057	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.075329 + 0.925694I$ $a = -0.124605 + 1.122850I$ $b = 1.72261 + 0.32384I$	$15.3392 + 9.3793I$	0
$u = -0.075329 - 0.925694I$ $a = -0.124605 - 1.122850I$ $b = 1.72261 - 0.32384I$	$15.3392 - 9.3793I$	0
$u = 0.090374 + 1.067480I$ $a = 0.114307 + 0.819229I$ $b = -1.62572 + 0.17083I$	$13.87510 - 0.52912I$	0
$u = 0.090374 - 1.067480I$ $a = 0.114307 - 0.819229I$ $b = -1.62572 - 0.17083I$	$13.87510 + 0.52912I$	0
$u = -0.351633 + 1.028510I$ $a = 0.076516 - 0.845833I$ $b = 0.576821 - 0.583368I$	$6.28954 + 2.36144I$	0
$u = -0.351633 - 1.028510I$ $a = 0.076516 + 0.845833I$ $b = 0.576821 + 0.583368I$	$6.28954 - 2.36144I$	0
$u = 0.114981 + 0.901161I$ $a = -1.19186 - 1.83232I$ $b = 1.58370 - 0.06665I$	$13.30610 - 1.90744I$	0
$u = 0.114981 - 0.901161I$ $a = -1.19186 + 1.83232I$ $b = 1.58370 + 0.06665I$	$13.30610 + 1.90744I$	0
$u = 0.038364 + 0.900051I$ $a = -0.32415 - 1.54825I$ $b = 1.57184 - 0.14261I$	$13.28250 + 1.24407I$	0
$u = 0.038364 - 0.900051I$ $a = -0.32415 + 1.54825I$ $b = 1.57184 + 0.14261I$	$13.28250 - 1.24407I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.381897 + 0.812659I$ $a = 1.59666 - 0.56281I$ $b = -0.655015 + 0.430426I$	$7.13711 - 6.82425I$	0
$u = 0.381897 - 0.812659I$ $a = 1.59666 + 0.56281I$ $b = -0.655015 - 0.430426I$	$7.13711 + 6.82425I$	0
$u = -0.479320 + 0.757238I$ $a = -0.150258 + 1.328570I$ $b = 0.637898 + 0.738470I$	$2.17073 + 2.60369I$	0
$u = -0.479320 - 0.757238I$ $a = -0.150258 - 1.328570I$ $b = 0.637898 - 0.738470I$	$2.17073 - 2.60369I$	0
$u = 0.368717 + 0.802163I$ $a = 0.103264 - 0.959262I$ $b = -0.775794 - 1.149540I$	$6.99281 + 3.81110I$	0
$u = 0.368717 - 0.802163I$ $a = 0.103264 + 0.959262I$ $b = -0.775794 + 1.149540I$	$6.99281 - 3.81110I$	0
$u = -0.495002 + 1.016410I$ $a = -0.508573 - 0.313164I$ $b = -0.549752 + 0.104184I$	$1.71215 - 3.87199I$	0
$u = -0.495002 - 1.016410I$ $a = -0.508573 + 0.313164I$ $b = -0.549752 - 0.104184I$	$1.71215 + 3.87199I$	0
$u = -0.525684 + 0.690822I$ $a = -0.21351 + 1.57522I$ $b = 1.097370 + 0.361003I$	$1.50059 + 1.26218I$	0
$u = -0.525684 - 0.690822I$ $a = -0.21351 - 1.57522I$ $b = 1.097370 - 0.361003I$	$1.50059 - 1.26218I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.534465 + 1.016380I$ $a = -1.057290 + 0.230653I$ $b = 0.576821 - 0.583368I$	$6.28954 + 2.36144I$	0
$u = 0.534465 - 1.016380I$ $a = -1.057290 - 0.230653I$ $b = 0.576821 + 0.583368I$	$6.28954 - 2.36144I$	0
$u = -0.864888 + 0.782442I$ $a = -0.548158 - 0.772833I$ $b = -1.51839$	8.58416	0
$u = -0.864888 - 0.782442I$ $a = -0.548158 + 0.772833I$ $b = -1.51839$	8.58416	0
$u = -0.047743 + 0.824577I$ $a = -1.92274 + 1.75421I$ $b = 1.60502 - 0.11915I$	$14.8937 - 8.8355I$	0
$u = -0.047743 - 0.824577I$ $a = -1.92274 - 1.75421I$ $b = 1.60502 + 0.11915I$	$14.8937 + 8.8355I$	0
$u = -0.250947 + 0.751345I$ $a = 1.35039 + 0.85488I$ $b = -0.563023 + 0.229679I$	$5.86017 - 0.82248I$	0
$u = -0.250947 - 0.751345I$ $a = 1.35039 - 0.85488I$ $b = -0.563023 - 0.229679I$	$5.86017 + 0.82248I$	0
$u = 0.577765 + 1.102210I$ $a = -0.35170 - 1.50242I$ $b = 1.56641 - 0.02917I$	$8.98118 - 4.39010I$	0
$u = 0.577765 - 1.102210I$ $a = -0.35170 + 1.50242I$ $b = 1.56641 + 0.02917I$	$8.98118 + 4.39010I$	0

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.691788 + 1.044050I$ $a = 0.00719 - 1.43711I$ $b = -1.59862 - 0.19607I$	$9.70426 + 5.93683I$	0
$u = -0.691788 - 1.044050I$ $a = 0.00719 + 1.43711I$ $b = -1.59862 + 0.19607I$	$9.70426 - 5.93683I$	0
$u = 0.480853 + 0.566284I$ $a = 0.73045 - 2.11810I$ $b = 0.518753$	1.41871	0
$u = 0.480853 - 0.566284I$ $a = 0.73045 + 2.11810I$ $b = 0.518753$	1.41871	0
$u = 0.200106 + 0.684096I$ $a = 0.386069 - 0.824872I$ $b = 0.637898 - 0.738470I$	$2.17073 - 2.60369I$	$9.54698 + 6.96810I$
$u = 0.200106 - 0.684096I$ $a = 0.386069 + 0.824872I$ $b = 0.637898 + 0.738470I$	$2.17073 + 2.60369I$	$9.54698 - 6.96810I$
$u = -0.588208 + 0.329396I$ $a = 0.22454 - 1.42162I$ $b = 0.066574 - 0.604668I$	$-1.43965 - 2.16802I$	$-4.95440 + 3.47274I$
$u = -0.588208 - 0.329396I$ $a = 0.22454 + 1.42162I$ $b = 0.066574 + 0.604668I$	$-1.43965 + 2.16802I$	$-4.95440 - 3.47274I$
$u = 0.747996 + 1.109260I$ $a = -0.218898 + 0.650559I$ $b = -1.59862 + 0.19607I$	$9.70426 - 5.93683I$	0
$u = 0.747996 - 1.109260I$ $a = -0.218898 - 0.650559I$ $b = -1.59862 - 0.19607I$	$9.70426 + 5.93683I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.840070 + 1.047900I$ $a = -0.005954 + 0.918057I$ $b = -0.775794 + 1.149540I$	$6.99281 - 3.81110I$	0
$u = 0.840070 - 1.047900I$ $a = -0.005954 - 0.918057I$ $b = -0.775794 - 1.149540I$	$6.99281 + 3.81110I$	0
$u = -0.586859 + 1.213690I$ $a = -0.212588 + 1.012480I$ $b = 0.521404 + 0.493566I$	$6.18148 + 6.08971I$	0
$u = -0.586859 - 1.213690I$ $a = -0.212588 - 1.012480I$ $b = 0.521404 - 0.493566I$	$6.18148 - 6.08971I$	0
$u = -0.802110 + 1.164690I$ $a = -0.105102 - 0.915114I$ $b = -0.655015 - 0.430426I$	$7.13711 + 6.82425I$	0
$u = -0.802110 - 1.164690I$ $a = -0.105102 + 0.915114I$ $b = -0.655015 + 0.430426I$	$7.13711 - 6.82425I$	0
$u = 0.440217 + 0.373005I$ $a = -0.357777 + 0.355965I$ $b = 1.097370 + 0.361003I$	$1.50059 + 1.26218I$	$-4.11625 + 3.56355I$
$u = 0.440217 - 0.373005I$ $a = -0.357777 - 0.355965I$ $b = 1.097370 - 0.361003I$	$1.50059 - 1.26218I$	$-4.11625 - 3.56355I$
$u = -0.170731 + 0.447358I$ $a = 0.96366 + 1.92676I$ $b = 0.539790$	1.75929	$7.33658 + 0.I$
$u = -0.170731 - 0.447358I$ $a = 0.96366 - 1.92676I$ $b = 0.539790$	1.75929	$7.33658 + 0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.81115 + 1.35766I$ $a = 0.116699 + 0.771146I$ $b = -1.159800 + 0.191275I$	$2.23592 - 4.97678I$	0
$u = 0.81115 - 1.35766I$ $a = 0.116699 - 0.771146I$ $b = -1.159800 - 0.191275I$	$2.23592 + 4.97678I$	0
$u = -0.67426 + 1.44318I$ $a = 0.332209 - 1.127350I$ $b = -1.56368 - 0.13058I$	$13.2660 + 8.2694I$	0
$u = -0.67426 - 1.44318I$ $a = 0.332209 + 1.127350I$ $b = -1.56368 + 0.13058I$	$13.2660 - 8.2694I$	0
$u = 1.13561 + 1.14397I$ $a = -0.478436 + 0.264820I$ $b = -0.437900 - 0.497668I$	$6.35842 - 3.57446I$	0
$u = 1.13561 - 1.14397I$ $a = -0.478436 - 0.264820I$ $b = -0.437900 + 0.497668I$	$6.35842 + 3.57446I$	0
$u = -1.14800 + 1.13498I$ $a = -0.265214 - 0.293687I$ $b = -0.563023 - 0.229679I$	$5.86017 + 0.82248I$	0
$u = -1.14800 - 1.13498I$ $a = -0.265214 + 0.293687I$ $b = -0.563023 + 0.229679I$	$5.86017 - 0.82248I$	0
$u = -0.338277 + 0.060821I$ $a = -0.61417 + 2.43408I$ $b = -1.159800 + 0.191275I$	$2.23592 - 4.97678I$	$1.10438 + 6.13491I$
$u = -0.338277 - 0.060821I$ $a = -0.61417 - 2.43408I$ $b = -1.159800 - 0.191275I$	$2.23592 + 4.97678I$	$1.10438 - 6.13491I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.14725 + 1.19823I$ $a = 0.256670 + 0.359569I$ $b = 1.56641 - 0.02917I$	$8.98118 - 4.39010I$	0
$u = -1.14725 - 1.19823I$ $a = 0.256670 - 0.359569I$ $b = 1.56641 + 0.02917I$	$8.98118 + 4.39010I$	0
$u = 0.94235 + 1.44632I$ $a = -0.062530 - 0.915398I$ $b = 1.72261 - 0.32384I$	$15.3392 - 9.3793I$	0
$u = 0.94235 - 1.44632I$ $a = -0.062530 + 0.915398I$ $b = 1.72261 + 0.32384I$	$15.3392 + 9.3793I$	0
$u = -1.01641 + 1.44985I$ $a = 0.039944 + 0.886627I$ $b = 1.60502 + 0.11915I$	$14.8937 + 8.8355I$	0
$u = -1.01641 - 1.44985I$ $a = 0.039944 - 0.886627I$ $b = 1.60502 - 0.11915I$	$14.8937 - 8.8355I$	0
$u = 1.60304 + 1.06764I$ $a = 0.332738 - 0.007652I$ $b = 0.521404 + 0.493566I$	$6.18148 + 6.08971I$	0
$u = 1.60304 - 1.06764I$ $a = 0.332738 + 0.007652I$ $b = 0.521404 - 0.493566I$	$6.18148 - 6.08971I$	0
$u = -1.61907 + 1.83755I$ $a = 0.080694 + 0.318163I$ $b = 1.58370 + 0.06665I$	$13.30610 + 1.90744I$	0
$u = -1.61907 - 1.83755I$ $a = 0.080694 - 0.318163I$ $b = 1.58370 - 0.06665I$	$13.30610 - 1.90744I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.69026 + 1.81481I$ $a = 0.109423 - 0.317057I$ $b = 1.57184 + 0.14261I$	$13.28250 - 1.24407I$	0
$u = 1.69026 - 1.81481I$ $a = 0.109423 + 0.317057I$ $b = 1.57184 - 0.14261I$	$13.28250 + 1.24407I$	0
$u = 2.59982 + 1.35757I$ $a = -0.166095 + 0.099938I$ $b = -1.56368 - 0.13058I$	$13.2660 + 8.2694I$	0
$u = 2.59982 - 1.35757I$ $a = -0.166095 - 0.099938I$ $b = -1.56368 + 0.13058I$	$13.2660 - 8.2694I$	0

III. $I_3^u = \langle -1.42\times 10^{18}u^{23} - 1.09\times 10^{19}u^{22} + \cdots + 9.43\times 10^{19}b - 2.24\times 10^{20},\ -2.42\times 10^{19}u^{23} - 2.30\times 10^{19}u^{22} + \cdots + 3.46\times 10^{20}a + 9.65\times 10^{20},\ u^{24} + u^{23} + \cdots - 44u + 11\rangle$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix}0.0699593u^{23} + 0.0665395u^{22} + \cdots + 9.63491u - 2.79229\\ 0.0150225u^{23} + 0.115770u^{22} + \cdots - 4.63853u + 2.37232\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-0.0928494u^{23} - 0.0868942u^{22} + \cdots - 9.98371u + 2.96317\\ 0.0522743u^{23} + 0.0351421u^{22} + \cdots + 3.47830u - 1.17586\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-0.0584261u^{23} - 0.0726681u^{22} + \cdots - 2.98534u + 2.06543\\ -0.0104009u^{23} - 0.0174400u^{22} + \cdots - 0.324061u - 0.146453\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}0.0922899u^{23} + 0.00485746u^{22} + \cdots + 13.3534u - 5.12700\\ -0.0389206u^{23} + 0.0983243u^{22} + \cdots - 8.58073u + 3.29646\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-0.102004u^{23} - 0.0433298u^{22} + \cdots - 5.35548u + 3.32001\\ 0.110443u^{23} + 0.133690u^{22} + \cdots - 1.11943u + 0.108090\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.0549367u^{23} - 0.0492302u^{22} + \cdots + 14.2734u - 5.16462\\ 0.0150225u^{23} + 0.115770u^{22} + \cdots - 4.63853u + 2.37232\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}0.00642856u^{23} + 0.107106u^{22} + \cdots - 3.16939u - 0.222412\\ 0.100468u^{23} + 0.0520650u^{22} + \cdots + 9.13311u - 1.00274\end{pmatrix}$$

$$a_7 = \begin{pmatrix}0.0894022u^{23} + 0.212775u^{22} + \cdots + 3.14475u - 0.583318\\ 0.0414184u^{23} - 0.0679770u^{22} + \cdots + 3.67274u - 0.718675\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.0605590u^{23} - 0.0764932u^{22} + \cdots - 2.19170u - 3.18750\\ 0.131334u^{23} + 0.186917u^{22} + \cdots + 4.57549u + 0.711578\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{20232201390387827417}{9428915167987333746 9}u^{23} - \frac{37327327826068007036}{9428915167987333746 9}u^{22} + \cdots - \frac{26509728925523150532 28}{9428915167987333746 9}u + \frac{5295243061712878212 57}{3142971722662444582 3}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^{24} + u^{23} + \cdots - 44u + 11$
c_2	$(u^{12} - 6u^{11} + \cdots - 8u^2 + 1)^2$
c_4, c_{10}	$11(11u^{24} + 178u^{22} + \cdots + 9157u^2 + 1787)$
c_5, c_{11}	$11(11u^{24} - 11u^{23} + \cdots - 6u + 1)$
c_6, c_9	$u^{24} - 2u^{23} + \cdots + 35u^2 + 11$
c_7, c_8	$(u^{12} + u^{11} + \cdots + 5u + 1)^2$
c_{12}	$(u^{12} - u^{11} + \cdots - 5u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^{24} + 9y^{23} + \cdots + 1188y + 121$
c_2	$(y^{12} - 10y^{11} + \cdots - 16y + 1)^2$
c_4, c_{10}	$121(11y^{12} + 178y^{11} + \cdots + 9157y + 1787)^2$
c_5, c_{11}	$121(121y^{24} - 1045y^{23} + \cdots - 6y + 1)$
c_6, c_9	$y^{24} + 2y^{23} + \cdots + 770y + 121$
c_7, c_8, c_{12}	$(y^{12} - 15y^{11} + \cdots - 35y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.226624 + 0.959178I$ $a = 0.508092 + 0.684855I$ $b = -1.72631 - 0.04641I$	$12.28740 + 0.00594I$	$8.38698 + 0.17944I$
$u = 0.226624 - 0.959178I$ $a = 0.508092 - 0.684855I$ $b = -1.72631 + 0.04641I$	$12.28740 - 0.00594I$	$8.38698 - 0.17944I$
$u = 0.922925 + 0.061385I$ $a = -0.174769 + 0.419362I$ $b = -0.275795 - 0.765914I$	$6.00889 + 5.09812I$	$7.06856 - 4.43197I$
$u = 0.922925 - 0.061385I$ $a = -0.174769 - 0.419362I$ $b = -0.275795 + 0.765914I$	$6.00889 - 5.09812I$	$7.06856 + 4.43197I$
$u = 0.126570 + 0.914912I$ $a = 0.511884 + 0.830363I$ $b = -1.72631 + 0.04641I$	$12.28740 - 0.00594I$	$8.38698 - 0.17944I$
$u = 0.126570 - 0.914912I$ $a = 0.511884 - 0.830363I$ $b = -1.72631 - 0.04641I$	$12.28740 + 0.00594I$	$8.38698 + 0.17944I$
$u = -0.212274 + 1.072130I$ $a = -0.172036 + 0.488889I$ $b = -0.851765 - 0.010312I$	$3.83086 + 5.34244I$	$7.49705 - 6.68257I$
$u = -0.212274 - 1.072130I$ $a = -0.172036 - 0.488889I$ $b = -0.851765 + 0.010312I$	$3.83086 - 5.34244I$	$7.49705 + 6.68257I$
$u = -0.505210 + 0.998540I$ $a = -0.602620 - 0.570906I$ $b = 0.178846$	5.25401	$7.03525 + 0.I$
$u = -0.505210 - 0.998540I$ $a = -0.602620 + 0.570906I$ $b = 0.178846$	5.25401	$7.03525 + 0.I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.446395 + 0.680430I$ $a = -0.27530 - 1.85841I$ $b = 0.973033 - 0.374713I$	$1.89515 - 1.45316I$	$12.20795 + 4.85996I$
$u = 0.446395 - 0.680430I$ $a = -0.27530 + 1.85841I$ $b = 0.973033 + 0.374713I$	$1.89515 + 1.45316I$	$12.20795 - 4.85996I$
$u = -0.640989 + 1.053800I$ $a = 0.006004 - 0.978688I$ $b = -0.275795 - 0.765914I$	$6.00889 + 5.09812I$	$7.06856 - 4.43197I$
$u = -0.640989 - 1.053800I$ $a = 0.006004 + 0.978688I$ $b = -0.275795 + 0.765914I$	$6.00889 - 5.09812I$	$7.06856 + 4.43197I$
$u = -1.19641 + 0.99995I$ $a = 0.480437 + 0.475873I$ $b = 1.43493$	9.90643	$12.16830 + 0.I$
$u = -1.19641 - 0.99995I$ $a = 0.480437 - 0.475873I$ $b = 1.43493$	9.90643	$12.16830 + 0.I$
$u = 0.246525 + 0.331360I$ $a = -1.04428 + 1.30839I$ $b = 0.973033 + 0.374713I$	$1.89515 + 1.45316I$	$12.20795 - 4.85996I$
$u = 0.246525 - 0.331360I$ $a = -1.04428 - 1.30839I$ $b = 0.973033 - 0.374713I$	$1.89515 - 1.45316I$	$12.20795 + 4.85996I$
$u = -0.77362 + 1.45062I$ $a = -0.204555 + 1.028440I$ $b = 1.57394 + 0.14834I$	$12.8107 + 7.9962I$	$3.73769 - 2.20153I$
$u = -0.77362 - 1.45062I$ $a = -0.204555 - 1.028440I$ $b = 1.57394 - 0.14834I$	$12.8107 - 7.9962I$	$3.73769 + 2.20153I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.75685 + 1.46605I$ $a = 0.100105 - 0.674178I$ $b = -0.851765 - 0.010312I$	$3.83086 + 5.34244I$	$7.49705 - 6.68257I$
$u = -0.75685 - 1.46605I$ $a = 0.100105 + 0.674178I$ $b = -0.851765 + 0.010312I$	$3.83086 - 5.34244I$	$7.49705 + 6.68257I$
$u = 1.61631 + 0.87256I$ $a = 0.139769 - 0.348919I$ $b = 1.57394 + 0.14834I$	$12.8107 + 7.9962I$	$3.73769 - 2.20153I$
$u = 1.61631 - 0.87256I$ $a = 0.139769 + 0.348919I$ $b = 1.57394 - 0.14834I$	$12.8107 - 7.9962I$	$3.73769 + 2.20153I$

IV. $\boldsymbol{I^u_4 = \langle -u^2 + b + u - 1,\ u^3 - u^2 + a + 2u,\ u^5 - u^4 + 3u^3 + u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^4 - 10u^3 + 20u^2 - 4u + 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^5 - u^4 + 3u^3 + u + 1$
c_2	$u^5 + 4u^4 + 9u^3 + 13u^2 + 11u + 5$
c_4, c_{10}	u^5
c_5, c_{11}	$u^5 - u^4 + u^3 + u - 1$
c_6, c_9	$u^5 + u^4 + u^2 + u + 1$
c_7, c_8	$u^5 - u^4 - 3u^3 + 3u^2 + 1$
c_{12}	$u^5 + u^4 - 3u^3 - 3u^2 - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3	$y^5 + 5y^4 + 11y^3 + 8y^2 + y - 1$
c_2	$y^5 + 2y^4 - y^3 - 11y^2 - 9y - 25$
c_4, c_{10}	y^5
c_5, c_{11}	$y^5 + y^4 + 3y^3 + y - 1$
c_6, c_9	$y^5 - y^4 - 3y^2 - y - 1$
c_7, c_8, c_{12}	$y^5 - 7y^4 + 15y^3 - 7y^2 - 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.210516 + 0.857202I$ $a = -0.656781 - 0.837593I$ $b = 0.099006 - 0.496292I$	$0.38751 - 3.74061I$	$0.97469 + 5.95799I$
$u = 0.210516 - 0.857202I$ $a = -0.656781 + 0.837593I$ $b = 0.099006 + 0.496292I$	$0.38751 + 3.74061I$	$0.97469 - 5.95799I$
$u = -0.507589$ $a = 1.40360$ $b = 1.76524$	6.95916	17.8890
$u = 0.54328 + 1.49449I$ $a = 0.454980 + 0.649504I$ $b = -1.48162 + 0.12936I$	$6.00251 - 5.77307I$	$9.58063 + 8.87442I$
$u = 0.54328 - 1.49449I$ $a = 0.454980 - 0.649504I$ $b = -1.48162 - 0.12936I$	$6.00251 + 5.77307I$	$9.58063 - 8.87442I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_3	$(u^5 - u^4 + 3u^3 + u + 1)(u^{24} + u^{23} + \cdots - 44u + 11)$ $\cdot (u^{36} - 3u^{35} + \cdots - 31u + 11)(u^{84} + 6u^{83} + \cdots - 75402u + 16109)$
c_2	$(u^5 + 4u^4 + 9u^3 + 13u^2 + 11u + 5)(u^{12} - 6u^{11} + \cdots - 8u^2 + 1)^2$ $\cdot (u^{36} - 7u^{35} + \cdots - 12071u + 1268)$ $\cdot (u^{42} + 7u^{41} + \cdots + 3649u + 1139)^2$
c_4, c_{10}	$121u^5(11u^{24} + 178u^{22} + \cdots + 9157u^2 + 1787)$ $\cdot (11u^{36} - 27u^{35} + \cdots - 224u + 64)(u^{42} + u^{41} + \cdots - 42u + 11)^2$
c_5, c_{11}	$121(u^5 - u^4 + u^3 + u - 1)(11u^{24} - 11u^{23} + \cdots - 6u + 1)$ $\cdot (11u^{36} - 5u^{35} + \cdots + 11u + 1)(u^{84} - 21u^{82} + \cdots - 44416u + 6119)$
c_6, c_9	$(u^5 + u^4 + u^2 + u + 1)(u^{24} - 2u^{23} + \cdots + 35u^2 + 11)$ $\cdot (u^{36} + u^{35} + \cdots + 17u + 11)(u^{84} - u^{83} + \cdots - 2672u + 2143)$
c_7, c_8	$(u^5 - u^4 - 3u^3 + 3u^2 + 1)(u^{12} + u^{11} + \cdots + 5u + 1)^2$ $\cdot (u^{36} + 4u^{35} + \cdots - 71u + 28)(u^{42} - 2u^{41} + \cdots + 22u + 19)^2$
c_{12}	$(u^5 + u^4 - 3u^3 - 3u^2 - 1)(u^{12} - u^{11} + \cdots - 5u + 1)^2$ $\cdot (u^{36} + 4u^{35} + \cdots - 71u + 28)(u^{42} - 2u^{41} + \cdots + 22u + 19)^2$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3	$(y^5+5y^4+11y^3+8y^2+y-1)(y^{24}+9y^{23}+\cdots+1188y+121)$ $\cdot(y^{36}+17y^{35}+\cdots+1525y+121)$ $\cdot(y^{84}+32y^{83}+\cdots+5914049372y+259499881)$
c_2	$(y^5+2y^4-y^3-11y^2-9y-25)(y^{12}-10y^{11}+\cdots-16y+1)^2$ $\cdot(y^{36}-5y^{35}+\cdots-32055665y+1607824)$ $\cdot(y^{42}-41y^{41}+\cdots+6170811y+1297321)^2$
c_4, c_{10}	$14641y^5(11y^{12}+178y^{11}+\cdots+9157y+1787)^2$ $\cdot(121y^{36}+4177y^{35}+\cdots-52224y+4096)$ $\cdot(y^{42}+39y^{41}+\cdots-5570y+121)^2$
c_5, c_{11}	$14641(y^5+y^4+3y^3+y-1)(121y^{24}-1045y^{23}+\cdots-6y+1)$ $\cdot(121y^{36}-179y^{35}+\cdots-15y+1)$ $\cdot(y^{84}-42y^{83}+\cdots-2518510190y+37442161)$
c_6, c_9	$(y^5-y^4-3y^2-y-1)(y^{24}+2y^{23}+\cdots+770y+121)$ $\cdot(y^{36}-9y^{35}+\cdots-993y+121)$ $\cdot(y^{84}+33y^{83}+\cdots+197735502y+4592449)$
c_7, c_8, c_{12}	$(y^5-7y^4+15y^3-7y^2-6y-1)(y^{12}-15y^{11}+\cdots-35y+1)^2$ $\cdot(y^{36}-42y^{35}+\cdots-10025y+784)$ $\cdot(y^{42}-50y^{41}+\cdots-7704y+361)^2$