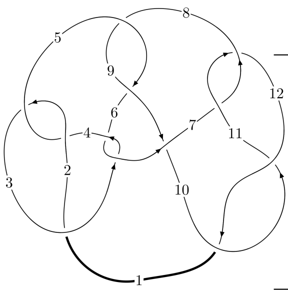
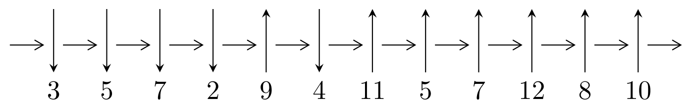
$12n_{0082}$ ($K12n_{0082}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I^u_1 = \langle &-1075292995u^{33} - 4308557086u^{32} + \cdots + 1783382596b - 2108461367, \\
&- 16834407501u^{33} - 77191989494u^{32} + \cdots + 1783382596a - 50354623549, \\
&u^{34} + 5u^{33} + \cdots + 17u + 1\rangle \\
I^u_2 = \langle &b,\ 3u^7 + u^6 - 4u^5 - 4u^4 + 5u^3 + 3u^2 + a - u - 5,\ u^8 + u^7 - u^6 - 2u^5 + u^4 + 2u^3 - 2u - 1\rangle \\
I^u_3 = \langle &-u^2a - 2u^2 + b + a + u + 2,\ a^2 + 2au + 4u^2 + a - 4u + 4,\ u^3 - u^2 + 1\rangle \\
I^u_4 = \langle &u^2 + b,\ a - u,\ u^3 - u^2 + 1\rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 51 representations.

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[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.
$\boldsymbol{I_1^u = \langle -1.08\times 10^{9}u^{33} - 4.31\times 10^{9}u^{32} + \cdots + 1.78\times 10^{9}b - 2.11\times 10^{9},\ -1.68\times 10^{10}u^{33} - 7.72\times 10^{10}u^{32} + \cdots + 1.78\times 10^{9}a - 5.04\times 10^{10},\ u^{34} + 5u^{33} + \cdots + 17u + 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 9.43959u^{33} + 43.2840u^{32} + \cdots + 295.933u + 28.2355 \\ 0.602951u^{33} + 2.41595u^{32} + \cdots + 10.5760u + 1.18228 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 10.0425u^{33} + 45.7000u^{32} + \cdots + 306.509u + 29.4177 \\ 0.602951u^{33} + 2.41595u^{32} + \cdots + 10.5760u + 1.18228 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -8.32985u^{33} - 34.9914u^{32} + \cdots - 174.842u - 14.4784 \\ 1.50407u^{33} + 6.20192u^{32} + \cdots + 28.1402u + 1.51861 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^5 + u \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^5 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -3.94864u^{33} - 16.6164u^{32} + \cdots - 92.4717u - 9.25517 \\ -0.647049u^{33} - 2.83405u^{32} + \cdots - 12.4240u - 1.06772 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 7.18982u^{33} + 33.9328u^{32} + \cdots + 248.452u + 22.9281 \\ 0.647049u^{33} + 2.83405u^{32} + \cdots + 12.4240u + 1.06772 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{749238525}{445845649}u^{33} - \frac{25224574109}{1783382596}u^{32} + \cdots - \frac{515748589297}{1783382596}u - \frac{13447700611}{445845649}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{34}+40u^{32}+\cdots+1011u+1$
c_2, c_4	$u^{34}-12u^{33}+\cdots+27u+1$
c_3, c_6	$u^{34}-4u^{33}+\cdots+896u-256$
c_5, c_8	$u^{34}-2u^{33}+\cdots-1536u-512$
c_7, c_{11}	$u^{34}-5u^{33}+\cdots-17u+1$
c_9	$u^{34}+5u^{33}+\cdots-34224u+2116$
c_{10}, c_{12}	$u^{34}-15u^{33}+\cdots-147u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{34} + 80y^{33} + \cdots - 1049111y + 1$
c_2, c_4	$y^{34} + 40y^{32} + \cdots - 1011y + 1$
c_3, c_6	$y^{34} + 60y^{33} + \cdots - 2146304y + 65536$
c_5, c_8	$y^{34} - 56y^{33} + \cdots - 1441792y + 262144$
c_7, c_{11}	$y^{34} - 15y^{33} + \cdots - 147y + 1$
c_9	$y^{34} - 83y^{33} + \cdots - 660094664y + 4477456$
c_{10}, c_{12}	$y^{34} + 13y^{33} + \cdots - 18915y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.675479 + 0.712354I$ $a = -0.270719 + 0.161827I$ $b = 0.097932 - 0.857151I$	$0.11560 + 2.14584I$	$4.84697 - 4.28283I$
$u = -0.675479 - 0.712354I$ $a = -0.270719 - 0.161827I$ $b = 0.097932 + 0.857151I$	$0.11560 - 2.14584I$	$4.84697 + 4.28283I$
$u = 0.787838 + 0.675769I$ $a = -0.413189 + 0.782228I$ $b = 0.360422 - 0.507830I$	$-2.05683 + 2.19416I$	$2.78133 - 4.16804I$
$u = 0.787838 - 0.675769I$ $a = -0.413189 - 0.782228I$ $b = 0.360422 + 0.507830I$	$-2.05683 - 2.19416I$	$2.78133 + 4.16804I$
$u = -0.994788 + 0.364572I$ $a = -1.43728 - 0.32761I$ $b = 1.097360 - 0.422286I$	$0.27995 - 2.43239I$	$4.42150 + 3.66524I$
$u = -0.994788 - 0.364572I$ $a = -1.43728 + 0.32761I$ $b = 1.097360 + 0.422286I$	$0.27995 + 2.43239I$	$4.42150 - 3.66524I$
$u = 0.883198 + 0.167536I$ $a = -0.82822 - 2.77937I$ $b = 0.390635 + 1.309810I$	$4.40661 - 2.39050I$	$8.72484 - 4.03068I$
$u = 0.883198 - 0.167536I$ $a = -0.82822 + 2.77937I$ $b = 0.390635 - 1.309810I$	$4.40661 + 2.39050I$	$8.72484 + 4.03068I$
$u = -0.439134 + 1.012860I$ $a = -0.14054 + 2.08289I$ $b = -0.21712 - 2.33804I$	$12.94380 - 1.52834I$	$2.89091 + 1.52951I$
$u = -0.439134 - 1.012860I$ $a = -0.14054 - 2.08289I$ $b = -0.21712 + 2.33804I$	$12.94380 + 1.52834I$	$2.89091 - 1.52951I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.554438 + 0.988490I$ $a = 0.37372 - 1.78363I$ $b = -0.69939 + 2.06047I$	$12.1480 + 7.3055I$	$2.34511 - 2.34014I$
$u = -0.554438 - 0.988490I$ $a = 0.37372 + 1.78363I$ $b = -0.69939 - 2.06047I$	$12.1480 - 7.3055I$	$2.34511 + 2.34014I$
$u = 0.877826 + 0.731952I$ $a = -2.89148 - 0.75774I$ $b = -0.433493 + 0.039285I$	$-4.30564 + 2.78916I$	$-43.5792 - 1.9775I$
$u = 0.877826 - 0.731952I$ $a = -2.89148 + 0.75774I$ $b = -0.433493 - 0.039285I$	$-4.30564 - 2.78916I$	$-43.5792 + 1.9775I$
$u = 0.960792 + 0.643718I$ $a = -1.56912 - 0.34499I$ $b = 0.705310 + 0.607713I$	$-1.51157 + 2.93275I$	$3.49597 - 2.09060I$
$u = 0.960792 - 0.643718I$ $a = -1.56912 + 0.34499I$ $b = 0.705310 - 0.607713I$	$-1.51157 - 2.93275I$	$3.49597 + 2.09060I$
$u = -0.988094 + 0.655947I$ $a = 0.798191 - 0.915301I$ $b = 0.242079 + 0.838628I$	$1.06007 - 7.41163I$	$6.37706 + 10.12845I$
$u = -0.988094 - 0.655947I$ $a = 0.798191 + 0.915301I$ $b = 0.242079 - 0.838628I$	$1.06007 + 7.41163I$	$6.37706 - 10.12845I$
$u = 1.134070 + 0.366301I$ $a = 1.64472 + 3.48212I$ $b = -0.39273 - 1.87590I$	$6.17981 + 3.91713I$	$6.50133 - 4.05550I$
$u = 1.134070 - 0.366301I$ $a = 1.64472 - 3.48212I$ $b = -0.39273 + 1.87590I$	$6.17981 - 3.91713I$	$6.50133 + 4.05550I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.759460 + 0.212841I$ $a = 2.07551 - 3.57649I$ $b = 0.167778 + 0.535642I$	$-0.839427 - 0.307998I$	$10.22671 + 6.42071I$
$u = -0.759460 - 0.212841I$ $a = 2.07551 + 3.57649I$ $b = 0.167778 - 0.535642I$	$-0.839427 + 0.307998I$	$10.22671 - 6.42071I$
$u = -0.199261 + 0.726308I$ $a = 0.009119 - 0.678462I$ $b = -0.695938 + 1.120220I$	$2.39265 - 0.51912I$	$3.37017 + 1.09835I$
$u = -0.199261 - 0.726308I$ $a = 0.009119 + 0.678462I$ $b = -0.695938 - 1.120220I$	$2.39265 + 0.51912I$	$3.37017 - 1.09835I$
$u = -1.155100 + 0.509124I$ $a = 0.68550 + 3.05854I$ $b = -1.31414 - 1.23344I$	$5.17110 - 4.13601I$	$6.26603 + 3.46699I$
$u = -1.155100 - 0.509124I$ $a = 0.68550 - 3.05854I$ $b = -1.31414 + 1.23344I$	$5.17110 + 4.13601I$	$6.26603 - 3.46699I$
$u = 1.331470 + 0.064618I$ $a = 0.73597 - 5.01515I$ $b = -0.62913 + 2.45336I$	$19.5904 + 4.8180I$	$6.85242 - 2.12746I$
$u = 1.331470 - 0.064618I$ $a = 0.73597 + 5.01515I$ $b = -0.62913 - 2.45336I$	$19.5904 - 4.8180I$	$6.85242 + 2.12746I$
$u = -0.647070$ $a = -0.602677$ $b = -0.176681$	0.883121	11.7300
$u = -1.141270 + 0.734626I$ $a = -1.07593 + 3.44611I$ $b = -0.83809 - 1.99730I$	$13.9751 - 13.5871I$	$3.82321 + 6.38940I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.141270-0.734626I$ $a=-1.07593-3.44611I$ $b=-0.83809+1.99730I$	$13.9751+13.5871I$	$3.82321-6.38940I$
$u=-1.202000+0.684331I$ $a=\ \ 1.86014-3.56344I$ $b=\ \ 0.00069+2.47834I$	$15.3278-4.6468I$	$5.01393+2.36080I$
$u=-1.202000-0.684331I$ $a=\ \ 1.86014+3.56344I$ $b=\ \ 0.00069-2.47834I$	$15.3278+4.6468I$	$5.01393-2.36080I$
$u=-0.0852780$ $a=\ \ 8.48988$ $b=\ \ 0.492352$	-1.21008	-9.44660

II. $\boldsymbol{I_2^u = \langle b,\ 3u^7 + u^6 - 4u^5 - 4u^4 + 5u^3 + 3u^2 + a - u - 5,\ u^8 + u^7 - u^6 - 2u^5 + u^4 + 2u^3 - 2u - 1\rangle}$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -3u^7 - u^6 + 4u^5 + 4u^4 - 5u^3 - 3u^2 + u + 5 \\ 0 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -3u^7 - u^6 + 4u^5 + 4u^4 - 5u^3 - 3u^2 + u + 5 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^3 \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^5 + u \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u^5 - u \\ u^5 - u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^5 - u \\ u^7 - u^5 + 2u^3 - u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -3u^7 - u^6 + 5u^5 + 4u^4 - 5u^3 - 3u^2 + 2u + 5 \\ -u^7 + u^5 - 2u^3 + u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -17u^7 - 6u^6 + 24u^5 + 22u^4 - 31u^3 - 17u^2 + 12u + 31$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^8$
c_3, c_6	y^8
c_5, c_8, c_9	$y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1$
c_7, c_{11}	$y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1$
c_{10}, c_{12}	$y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.570868 + 0.730671I$ $a = 0.615431 - 0.295452I$ $b = 0$	$-0.604279 + 1.131230I$	$1.048604 + 0.799861I$
$u = -0.570868 - 0.730671I$ $a = 0.615431 + 0.295452I$ $b = 0$	$-0.604279 - 1.131230I$	$1.048604 - 0.799861I$
$u = 0.855237 + 0.665892I$ $a = -1.68119 - 0.49658I$ $b = 0$	$-3.80435 + 2.57849I$	$-0.86993 - 2.07507I$
$u = 0.855237 - 0.665892I$ $a = -1.68119 + 0.49658I$ $b = 0$	$-3.80435 - 2.57849I$	$-0.86993 + 2.07507I$
$u = 1.09818$ $a = 0.532015$ $b = 0$	4.85780	9.68010
$u = -1.031810 + 0.655470I$ $a = 0.473764 + 0.240160I$ $b = 0$	$0.73474 - 6.44354I$	$3.69048 + 2.66284I$
$u = -1.031810 - 0.655470I$ $a = 0.473764 - 0.240160I$ $b = 0$	$0.73474 + 6.44354I$	$3.69048 - 2.66284I$
$u = -0.603304$ $a = 4.65198$ $b = 0$	-0.799899	25.5820

III.

$$\boldsymbol{I_3^u = \langle -u^2a - 2u^2 + b + a + u + 2,\ a^2 + 2au + 4u^2 + a - 4u + 4,\ u^3 - u^2 + 1 \rangle}$$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

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

$$a_3 = \begin{pmatrix} u^2a + 2u^2 - u - 2 \\ u^2a + 2u^2 - a - u - 2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^2a - au - a - 3 \\ u^2a + au + 3u^2 \end{pmatrix}$$

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

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

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

$$a_5 = \begin{pmatrix} u^2a - au - a - 3 \\ u^2a + au + 3u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2u^2a + 3u^2 - a - 5 \\ u^2a + au + 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^2a - 7au - 12u^2 - 3a - 4u + 4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.877439 + 0.744862I$ $a = -1.06984 - 1.06527I$ $b = -0.215080 + 1.307140I$	$5.65624I$	$3.29784 - 4.97572I$
$u = \quad 0.877439 + 0.744862I$ $a = -1.68504 - 0.42445I$ $b = -0.569840$	$-4.13758 + 2.82812I$	$11.29331 - 8.29280I$
$u = \quad 0.877439 - 0.744862I$ $a = -1.06984 + 1.06527I$ $b = -0.215080 - 1.307140I$	$-\,5.65624I$	$3.29784 + 4.97572I$
$u = \quad 0.877439 - 0.744862I$ $a = -1.68504 + 0.42445I$ $b = -0.569840$	$-4.13758 - 2.82812I$	$11.29331 + 8.29280I$
$u = -0.754878$ $a = \quad 0.25488 + 3.03873I$ $b = -0.215080 - 1.307140I$	$4.13758 - 2.82812I$	$0.90884 + 8.67250I$
$u = -0.754878$ $a = \quad 0.25488 - 3.03873I$ $b = -0.215080 + 1.307140I$	$4.13758 + 2.82812I$	$0.90884 - 8.67250I$

IV. $I_4^u = \langle u^2 + b,\ a - u,\ u^3 - u^2 + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -2u^2 + 3u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.877439 + 0.744862I$ $a = 0.877439 + 0.744862I$ $b = -0.215080 - 1.307140I$	0	$4.20216 - 0.37970I$
$u = 0.877439 - 0.744862I$ $a = 0.877439 - 0.744862I$ $b = -0.215080 + 1.307140I$	0	$4.20216 + 0.37970I$
$u = -0.754878$ $a = -0.754878$ $b = -0.569840$	0	-1.40430

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^8)(u^3-u^2+2u-1)^3(u^{34}+40u^{32}+\cdots+1011u+1)$
c_2	$((u-1)^8)(u^3+u^2-1)^3(u^{34}-12u^{33}+\cdots+27u+1)$
c_3	$u^8(u^3-u^2+2u-1)^3(u^{34}-4u^{33}+\cdots+896u-256)$
c_4	$((u+1)^8)(u^3-u^2+1)^3(u^{34}-12u^{33}+\cdots+27u+1)$
c_5	$u^9(u^8-u^7+\cdots-2u-1)(u^{34}-2u^{33}+\cdots-1536u-512)$
c_6	$u^8(u^3+u^2+2u+1)^3(u^{34}-4u^{33}+\cdots+896u-256)$
c_7	$(u^3-u^2+1)^3(u^8+u^7-u^6-2u^5+u^4+2u^3-2u-1)$ $\cdot(u^{34}-5u^{33}+\cdots-17u+1)$
c_8	$u^9(u^8+u^7+\cdots+2u-1)(u^{34}-2u^{33}+\cdots-1536u-512)$
c_9	$(u^3-u^2+2u-1)^3(u^8+u^7-3u^6-2u^5+3u^4+2u-1)$ $\cdot(u^{34}+5u^{33}+\cdots-34224u+2116)$
c_{10}	$(u^3+u^2+2u+1)^3$ $\cdot(u^8+3u^7+7u^6+10u^5+11u^4+10u^3+6u^2+4u+1)$ $\cdot(u^{34}-15u^{33}+\cdots-147u+1)$
c_{11}	$(u^3+u^2-1)^3(u^8-u^7-u^6+2u^5+u^4-2u^3+2u-1)$ $\cdot(u^{34}-5u^{33}+\cdots-17u+1)$
c_{12}	$(u^3-u^2+2u-1)^3$ $\cdot(u^8-3u^7+7u^6-10u^5+11u^4-10u^3+6u^2-4u+1)$ $\cdot(u^{34}-15u^{33}+\cdots-147u+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^8)(y^3+3y^2+2y-1)^3(y^{34}+80y^{33}+\cdots-1049111y+1)$
c_2, c_4	$((y-1)^8)(y^3-y^2+2y-1)^3(y^{34}+40y^{32}+\cdots-1011y+1)$
c_3, c_6	$y^8(y^3+3y^2+2y-1)^3(y^{34}+60y^{33}+\cdots-2146304y+65536)$
c_5, c_8	$y^9(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot(y^{34}-56y^{33}+\cdots-1441792y+262144)$
c_7, c_{11}	$(y^3-y^2+2y-1)^3$ $\cdot(y^8-3y^7+7y^6-10y^5+11y^4-10y^3+6y^2-4y+1)$ $\cdot(y^{34}-15y^{33}+\cdots-147y+1)$
c_9	$(y^3+3y^2+2y-1)^3$ $\cdot(y^8-7y^7+19y^6-22y^5+3y^4+14y^3-6y^2-4y+1)$ $\cdot(y^{34}-83y^{33}+\cdots-660094664y+4477456)$
c_{10}, c_{12}	$(y^3+3y^2+2y-1)^3$ $\cdot(y^8+5y^7+11y^6+6y^5-17y^4-34y^3-22y^2-4y+1)$ $\cdot(y^{34}+13y^{33}+\cdots-18915y+1)$