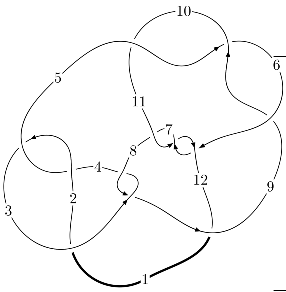
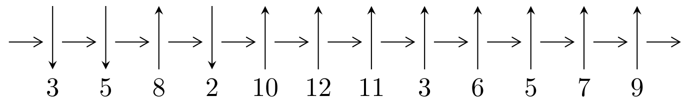
$12n_{0260}$ ($K12n_{0260}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -3u^{10} + u^9 - 26u^8 + 4u^7 - 82u^6 + u^5 - 107u^4 - 4u^3 - 35u^2 + 8b + 10u + 1, \\
& -21u^{10} + 7u^9 - 186u^8 + 20u^7 - 594u^6 - 33u^5 - 785u^4 - 48u^3 - 265u^2 + 32a + 162u + 15, \\
& u^{11} + 9u^9 + 2u^8 + 30u^7 + 11u^6 + 44u^5 + 15u^4 + 21u^3 - 3u^2 - u - 1\rangle \\
I_2^u = \langle & b,\ -u^2 + 2a - u - 3,\ u^3 + 2u - 1\rangle \\
I_3^u = \langle & 205u^9 - 272u^8 + 955u^7 - 1446u^6 + 1567u^5 - 1260u^4 + 1037u^3 + 526u^2 + 951b + 628u + 381, \\
& -190u^9 - 235u^8 - 514u^7 - 585u^6 + 728u^5 - 711u^4 - 590u^3 - 3874u^2 + 2853a - 1765u - 4737, \\
& u^{10} - 2u^9 + 7u^8 - 12u^7 + 19u^6 - 21u^5 + 23u^4 - 11u^3 + 16u^2 + 9\rangle \\
I_4^u = \langle & b,\ u^3 + a + u + 1,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle \\
I_5^u = \langle & -au + 2b - a - 2u,\ a^2 + au + a - 2u,\ u^2 + 1\rangle
\end{aligned}$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 32 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. $I_1^u = \langle -3u^{10}+u^9+\cdots+8b+1,\ -21u^{10}+7u^9+\cdots+32a+15,\ u^{11}+9u^9+\cdots-u-1\rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} 0.656250u^{10} - 0.218750u^9 + \cdots - 5.06250u - 0.468750 \\ \frac{3}{8}u^{10} - \frac{1}{8}u^9 + \cdots - \frac{5}{4}u - \frac{1}{8} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^2+1 \\ -u^4-2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.593750u^{10} - 0.0312500u^9 + \cdots - 4.43750u - 0.781250 \\ \frac{1}{2}u^{10} + \frac{9}{2}u^8 + \cdots + 5u^2 - 2u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{4}u^9 + 2u^7 + \cdots - \frac{1}{4}u - \frac{5}{4} \\ \frac{1}{4}u^9 + 2u^7 + \cdots - \frac{1}{4}u - \frac{1}{4} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.281250u^{10} - 0.0937500u^9 + \cdots - 4.81250u + 0.156250 \\ -\frac{3}{8}u^{10} + \frac{3}{8}u^9 + \cdots - \frac{1}{2}u - \frac{1}{8} \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^3+2u \\ -\frac{1}{4}u^{10} - 2u^8 + \cdots + \frac{1}{4}u^2 + \frac{5}{4}u \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ -\frac{1}{4}u^{10} - 2u^8 + \cdots + \frac{1}{4}u^2 + \frac{5}{4}u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1 \\ \frac{1}{4}u^9 + 2u^7 + \cdots - \frac{1}{4}u - \frac{1}{4} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes

$$= \frac{39}{64}u^{10} + \frac{27}{64}u^9 + \frac{175}{32}u^8 + \frac{85}{16}u^7 + \frac{619}{32}u^6 + \frac{1419}{64}u^5 + \frac{2147}{64}u^4 + \frac{151}{4}u^3 + \frac{1571}{64}u^2 + \frac{633}{32}u + \frac{163}{64}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{11} + 18u^{10} + \cdots + 1201u + 16$
c_2, c_4	$u^{11} - 4u^{10} + \cdots + 37u - 4$
c_3, c_8	$u^{11} + 3u^{10} + \cdots + 104u - 32$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$u^{11} + 9u^9 + 2u^8 + 30u^7 + 11u^6 + 44u^5 + 15u^4 + 21u^3 - 3u^2 - u - 1$
c_{12}	$u^{11} + 13u^9 + 2u^8 + 50u^7 + 25u^6 + 61u^5 + 79u^4 + 71u^3 - 7u^2 - 4u - 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{11} - 14y^{10} + \cdots + 1302785y - 256$
c_2, c_4	$y^{11} - 18y^{10} + \cdots + 1201y - 16$
c_3, c_8	$y^{11} + 21y^{10} + \cdots + 6464y - 1024$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$y^{11} + 18y^{10} + \cdots - 5y - 1$
c_{12}	$y^{11} + 26y^{10} + \cdots - 40y - 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.405677+0.805557I$ $a=\ \ 0.760429+0.630050I$ $b=\ \ 0.11145+1.86194I$	$-11.46380-1.35185I$	$1.54505+5.14075I$
$u=-0.405677-0.805557I$ $a=\ \ 0.760429-0.630050I$ $b=\ \ 0.11145-1.86194I$	$-11.46380+1.35185I$	$1.54505-5.14075I$
$u=-0.23897+1.55675I$ $a=\ \ 0.230096-0.384371I$ $b=\ \ 1.033710+0.020727I$	$-10.53020-4.19214I$	$1.36233+0.44368I$
$u=-0.23897-1.55675I$ $a=\ \ 0.230096+0.384371I$ $b=\ \ 1.033710-0.020727I$	$-10.53020+4.19214I$	$1.36233-0.44368I$
$u=\ \ 0.375177$ $a=-0.576120$ $b=\ \ 0.341658$	0.611064	16.3080
$u=-0.168597+0.298863I$ $a=-0.19001-2.05542I$ $b=-0.229927-0.652177I$	$-1.60266-0.72420I$	$-1.00231+3.71560I$
$u=-0.168597-0.298863I$ $a=-0.19001+2.05542I$ $b=-0.229927+0.652177I$	$-1.60266+0.72420I$	$-1.00231-3.71560I$
$u=\ \ 0.51296+1.70104I$ $a=\ \ 0.76568-1.38765I$ $b=-1.21043-2.42503I$	$11.0221+10.7546I$	$-1.36525-3.85022I$
$u=\ \ 0.51296-1.70104I$ $a=\ \ 0.76568+1.38765I$ $b=-1.21043+2.42503I$	$11.0221-10.7546I$	$-1.36525+3.85022I$
$u=\ \ 0.11269+1.88177I$ $a=-0.528135+1.174060I$ $b=-1.37564+2.29704I$	$-17.3399+2.6033I$	$-1.56897-1.12618I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.11269 - 1.88177I$ $a = -0.528135 - 1.174060I$ $b = -1.37564 - 2.29704I$	$-17.3399 - 2.6033I$	$-1.56897 + 1.12618I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{7}{4}u^2+\frac{21}{4}u+\frac{9}{4}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.22670 + 1.46771I$ $a = 0.335258 + 0.401127I$ $b = 0$	$-11.08570 - 5.13794I$	$-2.62004 + 6.54094I$
$u = -0.22670 - 1.46771I$ $a = 0.335258 - 0.401127I$ $b = 0$	$-11.08570 + 5.13794I$	$-2.62004 - 6.54094I$
$u = 0.453398$ $a = 1.82948$ $b = 0$	-0.857735	4.99010

III. $\boldsymbol{I_3^u = \langle 205u^9 - 272u^8 + \cdots + 951b + 381,\ -190u^9 - 235u^8 + \cdots + 2853a - 4737,\ u^{10} - 2u^9 + \cdots + 16u^2 + 9\rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.0665966u^9 + 0.0823694u^8 + \cdots + 0.618647u + 1.66036 \\ -0.215563u^9 + 0.286015u^8 + \cdots - 0.660358u - 0.400631 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0476691u^9 + 0.322117u^8 + \cdots + 0.653347u + 2.95689 \\ -0.376446u^9 + 0.323870u^8 + \cdots - 0.865405u + 0.119874 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.174553u^9 + 0.433228u^8 + \cdots - 1.23554u + 1.62355 \\ -0.126183u^9 + 0.264984u^8 + \cdots - 0.435331u - 0.356467 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.198738u^9 + 0.850683u^8 + \cdots + 0.197687u + 3.44690 \\ -0.164038u^9 + 0.744479u^8 + \cdots - 2.36593u - 0.763407 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.123729u^9 - 0.0487206u^8 + \cdots + 1.42131u + 1.13565 \\ 0.0357518u^9 - 0.00841220u^8 + \cdots - 0.509989u + 0.217666 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0.182615u^9 - 0.239047u^8 + \cdots + 2.75780u + 0.435331 \\ -0.0588854u^9 + 0.190326u^8 + \cdots + 0.663512u + 0.700315 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.0483701u^9 + 0.168244u^8 + \cdots - 0.800210u + 1.98002 \\ -0.126183u^9 + 0.264984u^8 + \cdots - 0.435331u - 0.356467 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= \frac{39}{317}u^9 + \frac{140}{317}u^8 - \frac{58}{317}u^7 + \frac{362}{317}u^6 - \frac{373}{317}u^5 - \frac{116}{317}u^4 + \frac{1289}{317}u^3 - \frac{653}{317}u^2 + \frac{1355}{317}u + \frac{1291}{317}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^5 + 11u^4 + 37u^3 + 30u^2 - 12u + 1)^2$
c_2, c_4	$(u^5 - 3u^4 - u^3 + 6u^2 + 1)^2$
c_3, c_8	$(u^5 - u^4 + 8u^3 - u^2 - 4u - 4)^2$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$u^{10} - 2u^9 + 7u^8 - 12u^7 + 19u^6 - 21u^5 + 23u^4 - 11u^3 + 16u^2 + 9$
c_{12}	$(u^5 + 6u^3 + u - 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^5 - 47y^4 + 685y^3 - 1810y^2 + 84y - 1)^2$
c_2, c_4	$(y^5 - 11y^4 + 37y^3 - 30y^2 - 12y - 1)^2$
c_3, c_8	$(y^5 + 15y^4 + 54y^3 - 73y^2 + 8y - 16)^2$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$y^{10} + 10y^9 + \cdots + 288y + 81$
c_{12}	$(y^5 + 12y^4 + 38y^3 + 12y^2 + y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.334233 + 1.155480I$ $a = -1.03102 + 1.25338I$ $b = 1.04912$	-5.84264	$-6 - 0.349607 + 0.10I$
$u = 0.334233 - 1.155480I$ $a = -1.03102 - 1.25338I$ $b = 1.04912$	-5.84264	$-6 - 0.349607 + 0.10I$
$u = -0.447614 + 0.607198I$ $a = 1.181370 - 0.198963I$ $b = -0.465884 + 0.485496I$	$-3.23236 - 1.37362I$	$4.45374 + 4.59823I$
$u = -0.447614 - 0.607198I$ $a = 1.181370 + 0.198963I$ $b = -0.465884 - 0.485496I$	$-3.23236 + 1.37362I$	$4.45374 - 4.59823I$
$u = 0.011167 + 1.262230I$ $a = -0.223398 - 0.807514I$ $b = -0.465884 - 0.485496I$	$-3.23236 + 1.37362I$	$4.45374 - 4.59823I$
$u = 0.011167 - 1.262230I$ $a = -0.223398 + 0.807514I$ $b = -0.465884 + 0.485496I$	$-3.23236 - 1.37362I$	$4.45374 + 4.59823I$
$u = 1.28009 + 0.69443I$ $a = -0.932756 - 0.175792I$ $b = 0.44133 + 2.86818I$	$18.4907 + 4.0569I$	$-0.27894 - 1.95729I$
$u = 1.28009 - 0.69443I$ $a = -0.932756 + 0.175792I$ $b = 0.44133 - 2.86818I$	$18.4907 - 4.0569I$	$-0.27894 + 1.95729I$
$u = -0.17787 + 1.78975I$ $a = -0.32754 - 1.78671I$ $b = 0.44133 - 2.86818I$	$18.4907 - 4.0569I$	$-0.27894 + 1.95729I$
$u = -0.17787 - 1.78975I$ $a = -0.32754 + 1.78671I$ $b = 0.44133 + 2.86818I$	$18.4907 + 4.0569I$	$-0.27894 - 1.95729I$

IV. $I_4^u = \langle b,\ u^3 + a + u + 1,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u^3 + 4u + 3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.621744 + 0.440597I$ $a = -0.500000 - 0.866025I$ $b = 0$	$-4.93480 - 2.02988I$	$1.0000 + 3.46410I$
$u = -0.621744 - 0.440597I$ $a = -0.500000 + 0.866025I$ $b = 0$	$-4.93480 + 2.02988I$	$1.0000 - 3.46410I$
$u = 0.121744 + 1.306620I$ $a = -0.500000 + 0.866025I$ $b = 0$	$-4.93480 + 2.02988I$	$1.00000 - 3.46410I$
$u = 0.121744 - 1.306620I$ $a = -0.500000 - 0.866025I$ $b = 0$	$-4.93480 - 2.02988I$	$1.00000 + 3.46410I$

V. $I_5^u = \langle -au + 2b - a - 2u,\ a^2 + au + a - 2u,\ u^2 + 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = 0.618034 + 0.618034I$ $b = 1.61803I$	-12.1725	-4.00000
$u = 1.000000I$ $a = -1.61803 - 1.61803I$ $b = -0.618034I$	-4.27683	-4.00000
$u = -1.000000I$ $a = 0.618034 - 0.618034I$ $b = -1.61803I$	-12.1725	-4.00000
$u = -1.000000I$ $a = -1.61803 + 1.61803I$ $b = 0.618034I$	-4.27683	-4.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^7(u^2-3u+1)^2(u^5+11u^4+37u^3+30u^2-12u+1)^2$ $\cdot(u^{11}+18u^{10}+\cdots+1201u+16)$
c_2	$(u-1)^7(u^2+u-1)^2(u^5-3u^4-u^3+6u^2+1)^2$ $\cdot(u^{11}-4u^{10}+\cdots+37u-4)$
c_3, c_8	$u^7(u^4+3u^2+1)(u^5-u^4+8u^3-u^2-4u-4)^2$ $\cdot(u^{11}+3u^{10}+\cdots+104u-32)$
c_4	$(u+1)^7(u^2-u-1)^2(u^5-3u^4-u^3+6u^2+1)^2$ $\cdot(u^{11}-4u^{10}+\cdots+37u-4)$
c_5, c_6, c_7	$(u^2+1)^2(u^3+2u+1)(u^4-u^3+2u^2-2u+1)$ $\cdot(u^{10}-2u^9+7u^8-12u^7+19u^6-21u^5+23u^4-11u^3+16u^2+9)$ $\cdot(u^{11}+9u^9+2u^8+30u^7+11u^6+44u^5+15u^4+21u^3-3u^2-u-1)$
c_9, c_{10}, c_{11}	$(u^2+1)^2(u^3+2u-1)(u^4+u^3+2u^2+2u+1)$ $\cdot(u^{10}-2u^9+7u^8-12u^7+19u^6-21u^5+23u^4-11u^3+16u^2+9)$ $\cdot(u^{11}+9u^9+2u^8+30u^7+11u^6+44u^5+15u^4+21u^3-3u^2-u-1)$
c_{12}	$(u^2+u+1)^2(u^3-3u^2+5u-2)(u^4+7u^2+1)(u^5+6u^3+u-1)^2$ $\cdot(u^{11}+13u^9+2u^8+50u^7+25u^6+61u^5+79u^4+71u^3-7u^2-4u-4)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^7(y^2-7y+1)^2(y^5-47y^4+685y^3-1810y^2+84y-1)^2$ $\cdot(y^{11}-14y^{10}+\cdots+1302785y-256)$
c_2, c_4	$(y-1)^7(y^2-3y+1)^2(y^5-11y^4+37y^3-30y^2-12y-1)^2$ $\cdot(y^{11}-18y^{10}+\cdots+1201y-16)$
c_3, c_8	$y^7(y^2+3y+1)^2(y^5+15y^4+54y^3-73y^2+8y-16)^2$ $\cdot(y^{11}+21y^{10}+\cdots+6464y-1024)$
c_5, c_6, c_7 c_9, c_{10}, c_{11}	$(y+1)^4(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{10}+10y^9+\cdots+288y+81)(y^{11}+18y^{10}+\cdots-5y-1)$
c_{12}	$(y^2+y+1)^2(y^2+7y+1)^2(y^3+y^2+13y-4)$ $\cdot((y^5+12y^4+38y^3+12y^2+y-1)^2)(y^{11}+26y^{10}+\cdots-40y-16)$