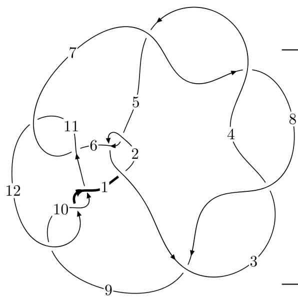
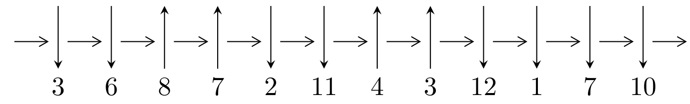
$12n_{0455}$ ($K12n_{0455}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 3.50811 \times 10^{48} u^{55} + 5.98520 \times 10^{48} u^{54} + \cdots + 2.69358 \times 10^{47} b + 4.89292 \times 10^{49},$$
$$2.55712 \times 10^{50} u^{55} + 4.32535 \times 10^{50} u^{54} + \cdots + 5.65653 \times 10^{48} a + 3.41422 \times 10^{51},\ u^{56} + 2u^{55} + \cdots + 44u +$$
$$I_2^u = \langle b,\ 3a + u + 1,\ u^2 - u + 1\rangle$$
$$I_3^u = \langle -au + 9b - 4a + u - 5,\ 2a^2 - au + 5u - 9,\ u^2 + 2\rangle$$

$$I_1^v = \langle a,\ b + v + 2,\ v^2 + 3v + 1\rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 64 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. $I_1^u =$
$\langle 3.51\times10^{48}u^{55}+5.99\times10^{48}u^{54}+\cdots+2.69\times10^{47}b+4.89\times10^{49},\ 2.56\times10^{50}u^{55}+4.33\times10^{50}u^{54}+\cdots+5.66\times10^{48}a+3.41\times10^{51},\ u^{56}+2u^{55}+\cdots+44u+4\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -45.2065u^{55} - 76.4665u^{54} + \cdots - 4615.91u - 603.589 \\ -13.0239u^{55} - 22.2202u^{54} + \cdots - 1365.32u - 181.651 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -32.1825u^{55} - 54.2463u^{54} + \cdots - 3250.59u - 421.938 \\ -13.0239u^{55} - 22.2202u^{54} + \cdots - 1365.32u - 181.651 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 33.0942u^{55} + 56.4532u^{54} + \cdots + 3417.51u + 449.013 \\ -28.0321u^{55} - 47.5425u^{54} + \cdots - 2839.05u - 370.800 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 27.7411u^{55} + 46.8651u^{54} + \cdots + 2813.09u + 362.109 \\ 24.2434u^{55} + 41.0750u^{54} + \cdots + 2515.79u + 329.906 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -27.7411u^{55} - 46.8651u^{54} + \cdots - 2813.09u - 362.109 \\ 27.3678u^{55} + 46.3317u^{54} + \cdots + 2783.98u + 364.375 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -28.1461u^{55} - 47.2742u^{54} + \cdots - 2852.14u - 366.930 \\ 28.0321u^{55} + 47.5425u^{54} + \cdots + 2839.05u + 370.800 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u \\ u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -46.3572u^{55} - 80.1696u^{54} + \cdots - 5049.53u - 698.513$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{56} + 24u^{55} + \cdots + 25165u + 361$
c_2, c_5	$u^{56} + 4u^{55} + \cdots - 41u + 19$
c_3, c_4, c_7 c_8	$u^{56} + 2u^{55} + \cdots + 44u + 4$
c_6, c_{11}	$u^{56} - 2u^{55} + \cdots - 108u + 36$
c_9, c_{10}, c_{12}	$u^{56} - 6u^{55} + \cdots + 31u + 9$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{56} + 16y^{55} + \cdots - 427912989y + 130321$
c_2, c_5	$y^{56} - 24y^{55} + \cdots - 25165y + 361$
c_3, c_4, c_7 c_8	$y^{56} + 50y^{55} + \cdots - 464y + 16$
c_6, c_{11}	$y^{56} - 24y^{55} + \cdots - 17784y + 1296$
c_9, c_{10}, c_{12}	$y^{56} - 50y^{55} + \cdots + 605y + 81$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.357425 + 0.939932I$ $a = -0.508559 + 0.668079I$ $b = -0.709734 + 0.751032I$	$0.10978 + 1.51144I$	0
$u = -0.357425 - 0.939932I$ $a = -0.508559 - 0.668079I$ $b = -0.709734 - 0.751032I$	$0.10978 - 1.51144I$	0
$u = 0.916252 + 0.279624I$ $a = -0.263707 - 0.445797I$ $b = -0.801946 + 0.644092I$	$0.01268 + 4.06286I$	$-6.20066 - 5.47620I$
$u = 0.916252 - 0.279624I$ $a = -0.263707 + 0.445797I$ $b = -0.801946 - 0.644092I$	$0.01268 - 4.06286I$	$-6.20066 + 5.47620I$
$u = -0.870458 + 0.356425I$ $a = -0.654647 + 0.719979I$ $b = -1.104950 - 0.815677I$	$-2.43509 - 10.45620I$	$-7.88871 + 7.69025I$
$u = -0.870458 - 0.356425I$ $a = -0.654647 - 0.719979I$ $b = -1.104950 + 0.815677I$	$-2.43509 + 10.45620I$	$-7.88871 - 7.69025I$
$u = -0.672518 + 0.823461I$ $a = 0.189263 - 0.600931I$ $b = 0.930657 - 0.635738I$	$-3.85927 + 5.20665I$	0
$u = -0.672518 - 0.823461I$ $a = 0.189263 + 0.600931I$ $b = 0.930657 + 0.635738I$	$-3.85927 - 5.20665I$	0
$u = 0.138429 + 1.163150I$ $a = 2.11508 + 0.18189I$ $b = 0.981368 - 0.595861I$	$-3.70144 - 0.59074I$	0
$u = 0.138429 - 1.163150I$ $a = 2.11508 - 0.18189I$ $b = 0.981368 + 0.595861I$	$-3.70144 + 0.59074I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.796673 + 0.217361I$ $a = 0.732692 - 0.735103I$ $b = 1.047550 + 0.754047I$	$2.36888 - 5.77663I$	$-3.49704 + 6.12922I$
$u = -0.796673 - 0.217361I$ $a = 0.732692 + 0.735103I$ $b = 1.047550 - 0.754047I$	$2.36888 + 5.77663I$	$-3.49704 - 6.12922I$
$u = -0.813175$ $a = 0.696477$ $b = -0.998455$	-7.46368	-11.8850
$u = 0.786622 + 0.053183I$ $a = 0.235360 + 0.517834I$ $b = 0.691285 - 0.845614I$	$3.46294 + 0.21119I$	$-6 - 0.626193 + 0.10I$
$u = 0.786622 - 0.053183I$ $a = 0.235360 - 0.517834I$ $b = 0.691285 + 0.845614I$	$3.46294 - 0.21119I$	$-6 - 0.626193 + 0.10I$
$u = 0.686659 + 1.019540I$ $a = 0.152248 + 0.372794I$ $b = 0.649441 + 0.261695I$	$-2.10341 + 1.46035I$	0
$u = 0.686659 - 1.019540I$ $a = 0.152248 - 0.372794I$ $b = 0.649441 - 0.261695I$	$-2.10341 - 1.46035I$	0
$u = 0.363201 + 1.199600I$ $a = 0.050246 - 0.686716I$ $b = -0.360705 - 0.909449I$	$-0.05819 + 3.93594I$	0
$u = 0.363201 - 1.199600I$ $a = 0.050246 + 0.686716I$ $b = -0.360705 + 0.909449I$	$-0.05819 - 3.93594I$	0
$u = 0.694825 + 0.177977I$ $a = -0.175933 + 0.543419I$ $b = -0.679667 - 1.057170I$	$-1.07651 + 3.71517I$	$-5.64023 - 4.49934I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.694825 - 0.177977I$ $a = -0.175933 - 0.543419I$ $b = -0.679667 + 1.057170I$	$-1.07651 - 3.71517I$	$-5.64023 + 4.49934I$
$u = -0.222724 + 1.263850I$ $a = 0.746580 - 0.478205I$ $b = 0.691653 - 0.998010I$	$-4.19144 - 2.28903I$	0
$u = -0.222724 - 1.263850I$ $a = 0.746580 + 0.478205I$ $b = 0.691653 + 0.998010I$	$-4.19144 + 2.28903I$	0
$u = 0.212493 + 0.663538I$ $a = -0.798139 + 0.138816I$ $b = -0.332186 + 0.507658I$	$-0.238433 + 1.252040I$	$-2.82125 - 5.02862I$
$u = 0.212493 - 0.663538I$ $a = -0.798139 - 0.138816I$ $b = -0.332186 - 0.507658I$	$-0.238433 - 1.252040I$	$-2.82125 + 5.02862I$
$u = -0.125478 + 1.304740I$ $a = -0.84758 + 1.18038I$ $b = -0.758335 - 0.376703I$	$-6.56363 - 1.59389I$	0
$u = -0.125478 - 1.304740I$ $a = -0.84758 - 1.18038I$ $b = -0.758335 + 0.376703I$	$-6.56363 + 1.59389I$	0
$u = -0.098940 + 1.329620I$ $a = -2.59434 + 0.37087I$ $b = -1.79675 + 0.14155I$	$-14.6366 - 1.4158I$	0
$u = -0.098940 - 1.329620I$ $a = -2.59434 - 0.37087I$ $b = -1.79675 - 0.14155I$	$-14.6366 + 1.4158I$	0
$u = 0.326495 + 1.296350I$ $a = -1.68324 - 0.31227I$ $b = -0.993147 + 0.745876I$	$-0.74471 + 4.21273I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.326495 - 1.296350I$ $a = -1.68324 + 0.31227I$ $b = -0.993147 - 0.745876I$	$-0.74471 - 4.21273I$	0
$u = -0.261932 + 1.315040I$ $a = 2.39778 - 0.42809I$ $b = 1.291360 + 0.390540I$	$-4.85102 - 4.10127I$	0
$u = -0.261932 - 1.315040I$ $a = 2.39778 + 0.42809I$ $b = 1.291360 - 0.390540I$	$-4.85102 + 4.10127I$	0
$u = -0.646445 + 0.063362I$ $a = -0.928542 + 0.691777I$ $b = -0.988563 - 0.589361I$	$-0.514192 - 0.792549I$	$-4.90653 + 2.84844I$
$u = -0.646445 - 0.063362I$ $a = -0.928542 - 0.691777I$ $b = -0.988563 + 0.589361I$	$-0.514192 + 0.792549I$	$-4.90653 - 2.84844I$
$u = -0.341280 + 1.316540I$ $a = 0.817304 - 0.783388I$ $b = 1.073100 + 0.391226I$	$-11.62750 - 4.16517I$	0
$u = -0.341280 - 1.316540I$ $a = 0.817304 + 0.783388I$ $b = 1.073100 - 0.391226I$	$-11.62750 + 4.16517I$	0
$u = 0.288431 + 1.366350I$ $a = 0.141585 + 0.969892I$ $b = 0.55694 + 1.31146I$	$-5.96654 + 7.30226I$	0
$u = 0.288431 - 1.366350I$ $a = 0.141585 - 0.969892I$ $b = 0.55694 - 1.31146I$	$-5.96654 - 7.30226I$	0
$u = 0.085846 + 1.404690I$ $a = -0.72751 - 1.48763I$ $b = 0.118836 + 0.664953I$	$-8.80079 + 0.29511I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.085846 - 1.404690I$ $a = -0.72751 + 1.48763I$ $b = 0.118836 - 0.664953I$	$-8.80079 - 0.29511I$	0
$u = -0.33202 + 1.39409I$ $a = -2.13548 + 0.45520I$ $b = -1.242450 - 0.672303I$	$-2.74251 - 9.86043I$	0
$u = -0.33202 - 1.39409I$ $a = -2.13548 - 0.45520I$ $b = -1.242450 + 0.672303I$	$-2.74251 + 9.86043I$	0
$u = -0.04599 + 1.47574I$ $a = 1.78492 - 0.56193I$ $b = 0.697621 - 0.210255I$	$-7.13747 + 0.98410I$	0
$u = -0.04599 - 1.47574I$ $a = 1.78492 + 0.56193I$ $b = 0.697621 + 0.210255I$	$-7.13747 - 0.98410I$	0
$u = 0.37725 + 1.42997I$ $a = 1.48324 + 0.27092I$ $b = 1.064050 - 0.776573I$	$-5.40146 + 8.69654I$	0
$u = 0.37725 - 1.42997I$ $a = 1.48324 - 0.27092I$ $b = 1.064050 + 0.776573I$	$-5.40146 - 8.69654I$	0
$u = -0.34531 + 1.47025I$ $a = 1.95103 - 0.36645I$ $b = 1.27086 + 0.84602I$	$-8.2789 - 14.8605I$	0
$u = -0.34531 - 1.47025I$ $a = 1.95103 + 0.36645I$ $b = 1.27086 - 0.84602I$	$-8.2789 + 14.8605I$	0
$u = 0.146752 + 0.464276I$ $a = 3.63219 + 0.90440I$ $b = 0.425085 - 0.514946I$	$-3.04021 - 0.77078I$	$-13.4195 - 5.3259I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.146752 - 0.464276I$ $a = 3.63219 - 0.90440I$ $b = 0.425085 + 0.514946I$	$-3.04021 + 0.77078I$	$-13.4195 + 5.3259I$
$u = -0.07154 + 1.61009I$ $a = -1.293690 + 0.377349I$ $b = -1.078470 + 0.249906I$	$-12.46720 + 2.72041I$	0
$u = -0.07154 - 1.61009I$ $a = -1.293690 - 0.377349I$ $b = -1.078470 - 0.249906I$	$-12.46720 - 2.72041I$	0
$u = -0.308833$ $a = -4.42147$ $b = 0.567778$	-2.38389	8.02900
$u = -0.296374$ $a = 0.686807$ $b = 1.68419$	-10.2992	9.48110
$u = -0.250665$ $a = -2.26479$ $b = -0.539323$	-1.17956	-7.76820

II. $I^u_2 = \langle b,\ 3a + u + 1,\ u^2 - u + 1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_{11} = \begin{pmatrix} -\frac{1}{3}u - \frac{1}{3} \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{1}{3}u - \frac{1}{3} \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ u - 1 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} \frac{2}{3}u - \frac{1}{3} \\ -u + 2 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1 \\ u - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u \\ u - 2 \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{20}{3}u - 3$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.500000 + 0.866025I$ $a = -0.500000 - 0.288675I$ $b = \quad 0$	$-1.64493 + 2.02988I$	$-6.33333 - 5.77350I$
$u = \quad 0.500000 - 0.866025I$ $a = -0.500000 + 0.288675I$ $b = \quad 0$	$-1.64493 - 2.02988I$	$-6.33333 + 5.77350I$

III. $I_3^u = \langle -au + 9b - 4a + u - 5,\ 2a^2 - au + 5u - 9,\ u^2 + 2 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} a \\ \frac{1}{9}au + \frac{4}{9}a - \frac{1}{9}u + \frac{5}{9} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{1}{9}au + \frac{5}{9}a + \frac{1}{9}u - \frac{5}{9} \\ \frac{1}{9}au + \frac{4}{9}a - \frac{1}{9}u + \frac{5}{9} \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ -u \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} \frac{1}{2}u - 2 \\ -\frac{1}{9}au - \frac{4}{9}a + \frac{1}{9}u - \frac{14}{9} \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{1}{9}au - \frac{4}{9}a + \frac{11}{18}u - \frac{14}{9} \\ -\frac{1}{9}au - \frac{4}{9}a + \frac{1}{9}u - \frac{14}{9} \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -\frac{1}{9}au - \frac{4}{9}a - \frac{7}{18}u - \frac{14}{9} \\ -\frac{1}{9}au - \frac{4}{9}a - \frac{8}{9}u - \frac{14}{9} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -\frac{1}{9}au - \frac{4}{9}a + \frac{11}{18}u - \frac{14}{9} \\ -\frac{1}{9}au - \frac{4}{9}a + \frac{1}{9}u - \frac{14}{9} \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -16$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.414210I$ $a = 2.23607 - 0.43702I$ $b = 1.61803$	-15.4624	-16.0000
$u = 1.414210I$ $a = -2.23607 + 1.14412I$ $b = -0.618034$	-7.56670	-16.0000
$u = -1.414210I$ $a = 2.23607 + 0.43702I$ $b = 1.61803$	-15.4624	-16.0000
$u = -1.414210I$ $a = -2.23607 - 1.14412I$ $b = -0.618034$	-7.56670	-16.0000

IV. $I_1^v = \langle a,\ b + v + 2,\ v^2 + 3v + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -26$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = -0.381966$ $a = 0$ $b = -1.61803$	-10.5276	-26.0000
$v = -2.61803$ $a = 0$ $b = 0.618034$	-2.63189	-26.0000

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^6)(u^2+u+1)(u^{56}+24u^{55}+\cdots+25165u+361)$
c_2	$((u-1)^2)(u+1)^4(u^2-u+1)(u^{56}+4u^{55}+\cdots-41u+19)$
c_3, c_4	$u^2(u^2+2)^2(u^2+u+1)(u^{56}+2u^{55}+\cdots+44u+4)$
c_5	$((u-1)^4)(u+1)^2(u^2+u+1)(u^{56}+4u^{55}+\cdots-41u+19)$
c_6	$u^2(u^2-u-1)^2(u^2+u-1)(u^{56}-2u^{55}+\cdots-108u+36)$
c_7, c_8	$u^2(u^2+2)^2(u^2-u+1)(u^{56}+2u^{55}+\cdots+44u+4)$
c_9, c_{10}	$((u-1)^2)(u^2+u-1)^3(u^{56}-6u^{55}+\cdots+31u+9)$
c_{11}	$u^2(u^2-u-1)(u^2+u-1)^2(u^{56}-2u^{55}+\cdots-108u+36)$
c_{12}	$((u+1)^2)(u^2-u-1)^3(u^{56}-6u^{55}+\cdots+31u+9)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^6)(y^2+y+1)(y^{56}+16y^{55}+\cdots-4.27913\times 10^8 y+130321)$
c_2, c_5	$((y-1)^6)(y^2+y+1)(y^{56}-24y^{55}+\cdots-25165y+361)$
c_3, c_4, c_7 c_8	$y^2(y+2)^4(y^2+y+1)(y^{56}+50y^{55}+\cdots-464y+16)$
c_6, c_{11}	$y^2(y^2-3y+1)^3(y^{56}-24y^{55}+\cdots-17784y+1296)$
c_9, c_{10}, c_{12}	$((y-1)^2)(y^2-3y+1)^3(y^{56}-50y^{55}+\cdots+605y+81)$