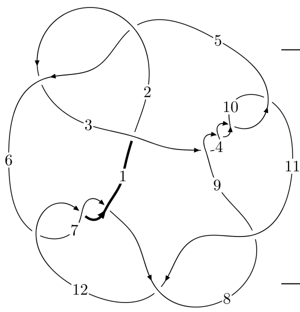
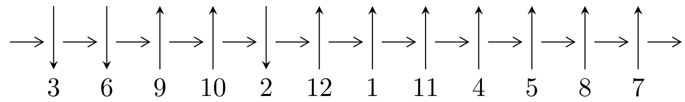
$12a_{0375}$ ($K12a_{0375}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle -4u^{42} + u^{41} + \cdots + 4b - 4,\ 2u^{42} - u^{41} + \cdots + 4a - 2,\ u^{43} - 2u^{42} + \cdots + 2u^2 - 2\rangle \\
I_2^u &= \langle 2u^5a - 2u^5 - a^2u^2 - 8u^3a + 2u^2a + 8u^3 + 2a^2 + 8au - 2u^2 + b - 4a - 8u + 4, \\
&\quad 2u^5a^2 - u^5a - 6u^3a^2 + u^5 + 2a^2u^2 + 6u^3a + a^3 + 4a^2u - u^2a - 4u^3 - 4a^2 - 8au + u^2 + 5a + 4u - 3, \\
&\quad u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1\rangle \\
I_3^u &= \langle b + u - 1,\ 2a - u,\ u^2 - 2\rangle
\end{aligned}$$

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

* 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.

$\boldsymbol{I_1^u = \langle -4u^{42}+u^{41}+\cdots+4b-4,\ 2u^{42}-u^{41}+\cdots+4a-2,\ u^{43}-2u^{42}+\cdots+2u^2-2\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}-\frac{1}{2}u^{42}+\frac{1}{4}u^{41}+\cdots-\frac{1}{2}u+\frac{1}{2}\\ u^{42}-\frac{1}{4}u^{41}+\cdots+\frac{1}{2}u+1\end{pmatrix}$$

$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$

$$a_6 = \begin{pmatrix}\frac{1}{2}u^{42}-\frac{23}{2}u^{40}+\cdots+u^2+\frac{3}{2}\\ -u^{42}+\frac{1}{4}u^{41}+\cdots-\frac{1}{2}u-1\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$

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

$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-\frac{1}{2}u^{42}+\frac{21}{2}u^{40}+\cdots-u-\frac{1}{2}\\ u^{42}-22u^{40}+\cdots+\frac{1}{2}u+1\end{pmatrix}$$

$$a_8 = \begin{pmatrix}u^5-2u^3-u\\-u^7+3u^5-2u^3+u\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}u^9-4u^7+3u^5+2u^3+u\\-u^{11}+5u^9-8u^7+5u^5-3u^3+u\end{pmatrix}$$

$$a_7 = \begin{pmatrix}\frac{1}{4}u^{32}-\frac{17}{4}u^{30}+\cdots-\frac{3}{2}u+\frac{1}{2}\\ -\frac{1}{4}u^{32}+4u^{30}+\cdots-\frac{1}{2}u^2+u\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2u^{42}-46u^{40}+\cdots-2u+8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{43} + 22u^{42} + \cdots + 9u + 1$
c_2, c_5	$u^{43} + 2u^{42} + \cdots + u - 1$
c_3, c_4, c_9 c_{10}	$u^{43} + 2u^{42} + \cdots - 2u^2 + 2$
c_6, c_7, c_{12}	$u^{43} - 2u^{42} + \cdots - 11u - 1$
c_8, c_{11}	$u^{43} + 6u^{42} + \cdots + 160u + 16$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{43} + 2y^{42} + \cdots + 53y - 1$
c_2, c_5	$y^{43} - 22y^{42} + \cdots + 9y - 1$
c_3, c_4, c_9 c_{10}	$y^{43} - 46y^{42} + \cdots + 8y - 4$
c_6, c_7, c_{12}	$y^{43} - 38y^{42} + \cdots + 89y - 1$
c_8, c_{11}	$y^{43} + 30y^{42} + \cdots + 26112y - 256$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.591746 + 0.636717I$ $a = -1.23572 - 1.63525I$ $b = -0.100756 + 0.318643I$	$-1.84282 + 10.94570I$	$6.30092 - 8.93673I$
$u = 0.591746 - 0.636717I$ $a = -1.23572 + 1.63525I$ $b = -0.100756 - 0.318643I$	$-1.84282 - 10.94570I$	$6.30092 + 8.93673I$
$u = -0.765729 + 0.373369I$ $a = -0.32757 + 1.59857I$ $b = 0.134514 - 0.340307I$	$5.12970 - 5.35425I$	$12.2003 + 7.7214I$
$u = -0.765729 - 0.373369I$ $a = -0.32757 - 1.59857I$ $b = 0.134514 + 0.340307I$	$5.12970 + 5.35425I$	$12.2003 - 7.7214I$
$u = 0.826606 + 0.202990I$ $a = 0.511476 + 0.581636I$ $b = 0.430064 + 0.050748I$	$6.06160 + 0.79364I$	$14.9061 - 0.8864I$
$u = 0.826606 - 0.202990I$ $a = 0.511476 - 0.581636I$ $b = 0.430064 - 0.050748I$	$6.06160 - 0.79364I$	$14.9061 + 0.8864I$
$u = -0.546701 + 0.616087I$ $a = -1.33752 + 1.76286I$ $b = -0.098208 - 0.285427I$	$-6.30176 - 6.51240I$	$1.84350 + 6.82731I$
$u = -0.546701 - 0.616087I$ $a = -1.33752 - 1.76286I$ $b = -0.098208 + 0.285427I$	$-6.30176 + 6.51240I$	$1.84350 - 6.82731I$
$u = -0.582396 + 0.579810I$ $a = 0.659858 - 0.192915I$ $b = 0.279952 - 0.384491I$	$1.26998 - 5.99398I$	$9.54778 + 6.06507I$
$u = -0.582396 - 0.579810I$ $a = 0.659858 + 0.192915I$ $b = 0.279952 + 0.384491I$	$1.26998 + 5.99398I$	$9.54778 - 6.06507I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.403178 + 0.680325I$ $a = 0.873527 + 0.218379I$ $b = -0.795082 - 0.902473I$	$-2.40444 - 6.51462I$	$5.07632 + 3.55431I$
$u = 0.403178 - 0.680325I$ $a = 0.873527 - 0.218379I$ $b = -0.795082 + 0.902473I$	$-2.40444 + 6.51462I$	$5.07632 - 3.55431I$
$u = -0.443849 + 0.633747I$ $a = 0.902439 - 0.228432I$ $b = -0.888609 + 0.891580I$	$-6.60622 + 2.27578I$	$0.698054 - 0.385736I$
$u = -0.443849 - 0.633747I$ $a = 0.902439 + 0.228432I$ $b = -0.888609 - 0.891580I$	$-6.60622 - 2.27578I$	$0.698054 + 0.385736I$
$u = -0.377654 + 0.599705I$ $a = 0.738904 - 0.108280I$ $b = 0.103319 - 0.421977I$	$0.67597 + 1.96643I$	$8.14582 + 0.08681I$
$u = -0.377654 - 0.599705I$ $a = 0.738904 + 0.108280I$ $b = 0.103319 + 0.421977I$	$0.67597 - 1.96643I$	$8.14582 - 0.08681I$
$u = 1.34352$ $a = -0.457746$ $b = 1.25945$	6.42503	14.7720
$u = 0.596066 + 0.273723I$ $a = 0.15234 - 2.25587I$ $b = 0.108473 + 0.195176I$	$-0.17994 + 3.15116I$	$7.13825 - 9.28828I$
$u = 0.596066 - 0.273723I$ $a = 0.15234 + 2.25587I$ $b = 0.108473 - 0.195176I$	$-0.17994 - 3.15116I$	$7.13825 + 9.28828I$
$u = -0.084134 + 0.604122I$ $a = 0.845349 - 0.074679I$ $b = -0.465947 + 0.534008I$	$2.98218 + 1.98828I$	$8.33137 - 3.20557I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.084134-0.604122I$ $a=0.845349+0.074679I$ $b=-0.465947-0.534008I$	$2.98218-1.98828I$	$8.33137+3.20557I$
$u=-1.43197$ $a=0.0229961$ $b=1.00111$	3.32572	0
$u=-1.43137+0.20558I$ $a=0.132330-0.142499I$ $b=0.955154-0.077955I$	$3.46742+3.34369I$	0
$u=-1.43137-0.20558I$ $a=0.132330+0.142499I$ $b=0.955154+0.077955I$	$3.46742-3.34369I$	0
$u=1.47158+0.11058I$ $a=-0.881376-0.770659I$ $b=1.53453+1.36753I$	$6.53226+0.41130I$	0
$u=1.47158-0.11058I$ $a=-0.881376+0.770659I$ $b=1.53453-1.36753I$	$6.53226-0.41130I$	0
$u=1.47924+0.17979I$ $a=0.131246+0.108669I$ $b=0.986913+0.072464I$	$-0.365210+0.609893I$	0
$u=1.47924-0.17979I$ $a=0.131246-0.108669I$ $b=0.986913-0.072464I$	$-0.365210-0.609893I$	0
$u=-0.463968$ $a=1.94534$ $b=0.138255$	0.736315	13.7490
$u=1.53818+0.18818I$ $a=0.21264+2.03609I$ $b=-0.50972-4.35591I$	$0.59349+9.42918I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.53818 - 0.18818I$ $a = 0.21264 - 2.03609I$ $b = -0.50972 + 4.35591I$	$0.59349 - 9.42918I$	0
$u = -1.55142 + 0.05723I$ $a = -0.80889 - 2.01985I$ $b = 1.44195 + 4.18487I$	$7.05051 - 4.24670I$	0
$u = -1.55142 - 0.05723I$ $a = -0.80889 + 2.01985I$ $b = 1.44195 - 4.18487I$	$7.05051 + 4.24670I$	0
$u = 1.55532 + 0.17621I$ $a = -0.711365 - 0.950566I$ $b = 0.99205 + 1.76418I$	$8.38956 + 8.75469I$	0
$u = 1.55532 - 0.17621I$ $a = -0.711365 + 0.950566I$ $b = 0.99205 - 1.76418I$	$8.38956 - 8.75469I$	0
$u = -1.55776 + 0.19984I$ $a = 0.19109 - 1.91237I$ $b = -0.48048 + 4.13035I$	$5.2865 - 14.0160I$	0
$u = -1.55776 - 0.19984I$ $a = 0.19109 + 1.91237I$ $b = -0.48048 - 4.13035I$	$5.2865 + 14.0160I$	0
$u = 0.155892 + 0.389253I$ $a = 0.939590 + 0.061625I$ $b = -0.782027 - 0.295786I$	$-1.51738 - 0.78597I$	$-1.81615 + 1.01522I$
$u = 0.155892 - 0.389253I$ $a = 0.939590 - 0.061625I$ $b = -0.782027 + 0.295786I$	$-1.51738 + 0.78597I$	$-1.81615 - 1.01522I$
$u = -1.60026 + 0.04435I$ $a = -0.79147 + 1.29002I$ $b = 1.26150 - 2.64623I$	$14.2395 - 1.6305I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.60026 - 0.04435I$ $a = -0.79147 - 1.29002I$ $b = 1.26150 + 2.64623I$	$14.2395 + 1.6305I$	0
$u = 1.59968 + 0.08511I$ $a = -0.45217 + 1.80198I$ $b = 0.69300 - 3.81498I$	$13.1581 + 6.9538I$	0
$u = 1.59968 - 0.08511I$ $a = -0.45217 - 1.80198I$ $b = 0.69300 + 3.81498I$	$13.1581 - 6.9538I$	0

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

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^3 - 8u + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{18} + 12u^{17} + \cdots + 5u + 1$
c_2, c_5, c_6 c_7, c_{12}	$u^{18} - 6u^{16} + \cdots + u - 1$
c_3, c_4, c_9 c_{10}	$(u^6 - u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1)^3$
c_8, c_{11}	$(u^6 + u^5 + 3u^4 + 2u^3 + 2u^2 + u - 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{18} - 12y^{17} + \cdots - 17y + 1$
c_2, c_5, c_6 c_7, c_{12}	$y^{18} - 12y^{17} + \cdots - 5y + 1$
c_3, c_4, c_9 c_{10}	$(y^6 - 7y^5 + 17y^4 - 16y^3 + 6y^2 - 5y + 1)^3$
c_8, c_{11}	$(y^6 + 5y^5 + 9y^4 + 4y^3 - 6y^2 - 5y + 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.493180 + 0.575288I$ $a = 0.941013 + 0.239784I$ $b = -1.009960 - 0.876429I$	$-2.96024 + 1.97241I$	$4.57572 - 3.68478I$
$u = 0.493180 + 0.575288I$ $a = 0.703854 + 0.163676I$ $b = 0.204229 + 0.389849I$	$-2.96024 + 1.97241I$	$4.57572 - 3.68478I$
$u = 0.493180 + 0.575288I$ $a = -1.46493 - 2.00338I$ $b = -0.086351 + 0.244114I$	$-2.96024 + 1.97241I$	$4.57572 - 3.68478I$
$u = 0.493180 - 0.575288I$ $a = 0.941013 - 0.239784I$ $b = -1.009960 + 0.876429I$	$-2.96024 - 1.97241I$	$4.57572 + 3.68478I$
$u = 0.493180 - 0.575288I$ $a = 0.703854 - 0.163676I$ $b = 0.204229 - 0.389849I$	$-2.96024 - 1.97241I$	$4.57572 + 3.68478I$
$u = 0.493180 - 0.575288I$ $a = -1.46493 + 2.00338I$ $b = -0.086351 - 0.244114I$	$-2.96024 - 1.97241I$	$4.57572 + 3.68478I$
$u = -0.483672$ $a = 1.12121$ $b = -1.42631$	0.738851	13.4170
$u = -0.483672$ $a = 1.85982 + 0.59462I$ $b = 0.146924 - 0.011821I$	0.738851	13.4170
$u = -0.483672$ $a = 1.85982 - 0.59462I$ $b = 0.146924 + 0.011821I$	0.738851	13.4170
$u = -1.52087 + 0.16310I$ $a = -0.751848 + 0.903227I$ $b = 1.13095 - 1.63417I$	$3.69558 - 4.59213I$	$8.58114 + 3.20482I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.52087+0.16310I$ $a=\ \ 0.137996-0.084846I$ $b=\ \ 1.011050-0.070016I$	$3.69558-4.59213I$	$8.58114+3.20482I$
$u=-1.52087+0.16310I$ $a=\ \ 0.15868-2.23953I$ $b=-0.39625+4.72775I$	$3.69558-4.59213I$	$8.58114+3.20482I$
$u=-1.52087-0.16310I$ $a=-0.751848-0.903227I$ $b=\ \ 1.13095+1.63417I$	$3.69558+4.59213I$	$8.58114-3.20482I$
$u=-1.52087-0.16310I$ $a=\ \ 0.137996+0.084846I$ $b=\ \ 1.011050+0.070016I$	$3.69558+4.59213I$	$8.58114-3.20482I$
$u=-1.52087-0.16310I$ $a=\ \ 0.15868+2.23953I$ $b=-0.39625-4.72775I$	$3.69558+4.59213I$	$8.58114-3.20482I$
$u=\ \ 1.53904$ $a=\ \ 0.110457$ $b=\ \ 1.03249$	7.66009	12.2690
$u=\ \ 1.53904$ $a=-1.20042+1.54308I$ $b=\ \ 2.19632-3.14900I$	7.66009	12.2690
$u=\ \ 1.53904$ $a=-1.20042-1.54308I$ $b=\ \ 2.19632+3.14900I$	7.66009	12.2690

III. $I_3^u = \langle b+u-1,\ 2a-u,\ u^2-2\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.41421$ $a = 0.707107$ $b = -0.414214$	4.93480	8.00000
$u = -1.41421$ $a = -0.707107$ $b = 2.41421$	4.93480	8.00000

IV. $\boldsymbol{I_1^v = \langle a,\ b+1,\ v-1 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

$$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 1.00000$		
$a = 0$	0	0
$b = -1.00000$		

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^3)(u^{18}+12u^{17}+\cdots+5u+1)(u^{43}+22u^{42}+\cdots+9u+1)$
c_2	$(u-1)(u+1)^2(u^{18}-6u^{16}+\cdots+u-1)(u^{43}+2u^{42}+\cdots+u-1)$
c_3, c_4, c_9 c_{10}	$u(u^2-2)(u^6-u^5+\cdots+u-1)^3(u^{43}+2u^{42}+\cdots-2u^2+2)$
c_5	$((u-1)^2)(u+1)(u^{18}-6u^{16}+\cdots+u-1)(u^{43}+2u^{42}+\cdots+u-1)$
c_6, c_7	$((u-1)^2)(u+1)(u^{18}-6u^{16}+\cdots+u-1)(u^{43}-2u^{42}+\cdots-11u-1)$
c_8, c_{11}	$u^3(u^6+u^5+\cdots+u-1)^3(u^{43}+6u^{42}+\cdots+160u+16)$
c_{12}	$(u-1)(u+1)^2(u^{18}-6u^{16}+\cdots+u-1)(u^{43}-2u^{42}+\cdots-11u-1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^3)(y^{18}-12y^{17}+\cdots-17y+1)(y^{43}+2y^{42}+\cdots+53y-1)$
c_2, c_5	$((y-1)^3)(y^{18}-12y^{17}+\cdots-5y+1)(y^{43}-22y^{42}+\cdots+9y-1)$
c_3, c_4, c_9 c_{10}	$y(y-2)^2(y^6-7y^5+17y^4-16y^3+6y^2-5y+1)^3$ $\cdot(y^{43}-46y^{42}+\cdots+8y-4)$
c_6, c_7, c_{12}	$((y-1)^3)(y^{18}-12y^{17}+\cdots-5y+1)(y^{43}-38y^{42}+\cdots+89y-1)$
c_8, c_{11}	$y^3(y^6+5y^5+9y^4+4y^3-6y^2-5y+1)^3$ $\cdot(y^{43}+30y^{42}+\cdots+26112y-256)$