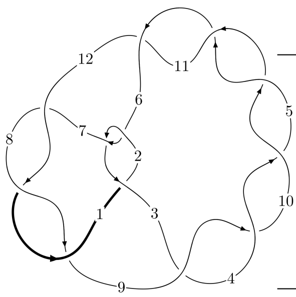
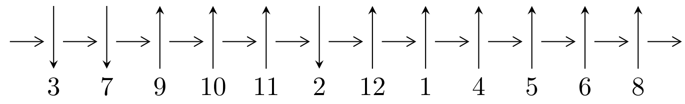
$12a_{0576}$ $(K12a_{0576})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 11985u^{24} + 25005u^{23} + \cdots + 72188b - 244730, \\
& -211795u^{24} - 38567u^{23} + \cdots + 505316a - 3814672,\ u^{25} - u^{24} + \cdots - 9u - 7\rangle \\
I_2^u = \langle & u^3 + b - u,\ a + u,\ u^9 - 3u^7 + u^6 + 3u^5 - 2u^4 - 3u^3 + u^2 + 2u - 1\rangle \\
I_3^u = \langle & b - a + 1,\ a^2 - 2a - 2,\ u + 1\rangle \\
I_4^u = \langle & b - 1,\ a,\ u - 1\rangle \\
I_5^u = \langle & b + 1,\ a + 2,\ u - 1\rangle \\
I_6^u = \langle & b - 1,\ a - 1,\ u - 1\rangle \\
I_7^u = \langle & b,\ a - 1,\ u + 1\rangle
\end{aligned}$$

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

* 8 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 41 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. $\boldsymbol{I_1^u = \langle 11985u^{24} + 25005u^{23} + \cdots + 72188b - 244730,\ -2.12 \times 10^5 u^{24} - 3.86 \times 10^4 u^{23} + \cdots + 5.05 \times 10^5 a - 3.81 \times 10^6,\ u^{25} - u^{24} + \cdots - 9u - 7\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.419134u^{24} + 0.0763225u^{23} + \cdots - 0.423143u + 7.54908 \\ -0.166025u^{24} - 0.346387u^{23} + \cdots + 2.60629u + 3.39018 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.484311u^{24} - 0.650336u^{23} + \cdots + 12.6564u - 0.752505 \\ -0.101956u^{24} - 0.126046u^{23} + \cdots + 0.520322u - 3.17143 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.523558u^{24} - 0.576639u^{23} + \cdots + 3.23109u - 5.84862 \\ 0.409514u^{24} + 0.597509u^{23} + \cdots - 4.14134u - 3.60527 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.585159u^{24} + 0.422710u^{23} + \cdots - 3.02944u + 4.15891 \\ -0.166025u^{24} - 0.346387u^{23} + \cdots + 2.60629u + 3.39018 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.995781u^{24} - 0.0732195u^{23} + \cdots - 7.99477u + 3.18634 \\ 0.246842u^{24} + 0.673949u^{23} + \cdots - 7.09679u + 2.13396 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.479844u^{24} - 0.692303u^{23} + \cdots + 4.66701u - 9.17722 \\ 0.348285u^{24} + 0.294232u^{23} + \cdots - 0.412423u - 4.84612 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.37385u^{24} - 0.126816u^{23} + \cdots + 11.2503u - 2.86998 \\ 0.198759u^{24} - 1.06936u^{23} + \cdots + 15.0646u + 1.75878 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{60407}{36094}u^{24} + \frac{67585}{36094}u^{23} + \cdots - \frac{588579}{36094}u + \frac{309390}{18047}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{25} + 7u^{24} + \cdots + 739u + 49$
c_2, c_6	$u^{25} - u^{24} + \cdots - 9u - 7$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$u^{25} + 2u^{24} + \cdots + 2u + 2$
c_7, c_8, c_{12}	$u^{25} + u^{24} + \cdots + 39u - 9$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{25} + 29y^{24} + \cdots + 138539y - 2401$
c_2, c_6	$y^{25} - 7y^{24} + \cdots + 739y - 49$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y^{25} - 36y^{24} + \cdots + 147y^2 - 4$
c_7, c_8, c_{12}	$y^{25} - 31y^{24} + \cdots + 1755y - 81$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.896141 + 0.476708I$ $a = 0.264009 + 1.247940I$ $b = -0.518330 + 0.326163I$	$-0.17909 - 3.47166I$	$8.30266 + 8.94170I$
$u = 0.896141 - 0.476708I$ $a = 0.264009 - 1.247940I$ $b = -0.518330 - 0.326163I$	$-0.17909 + 3.47166I$	$8.30266 - 8.94170I$
$u = 0.712580 + 0.800068I$ $a = -0.424664 - 0.601315I$ $b = -0.730693 - 0.421612I$	$6.89461 + 0.59668I$	$14.2492 - 1.6095I$
$u = 0.712580 - 0.800068I$ $a = -0.424664 + 0.601315I$ $b = -0.730693 + 0.421612I$	$6.89461 - 0.59668I$	$14.2492 + 1.6095I$
$u = -0.871015 + 0.279677I$ $a = -0.337858 + 0.872649I$ $b = -0.111064 + 0.372277I$	$-1.37494 + 1.08288I$	$0.78629 - 1.57388I$
$u = -0.871015 - 0.279677I$ $a = -0.337858 - 0.872649I$ $b = -0.111064 - 0.372277I$	$-1.37494 - 1.08288I$	$0.78629 + 1.57388I$
$u = -1.09658$ $a = -1.64444$ $b = -1.74239$	11.6378	5.99100
$u = -0.874419 + 0.729333I$ $a = 0.344893 - 1.149310I$ $b = 0.073544 - 0.603993I$	$4.42212 + 2.78000I$	$9.55915 - 2.23614I$
$u = -0.874419 - 0.729333I$ $a = 0.344893 + 1.149310I$ $b = 0.073544 + 0.603993I$	$4.42212 - 2.78000I$	$9.55915 + 2.23614I$
$u = -0.582867 + 0.979338I$ $a = 0.091026 - 0.120602I$ $b = 1.354550 - 0.178353I$	$13.77140 - 2.72282I$	$16.3024 + 1.1923I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.582867 - 0.979338I$ $a = 0.091026 + 0.120602I$ $b = 1.354550 + 0.178353I$	$13.77140 + 2.72282I$	$16.3024 - 1.1923I$
$u = -0.947893 + 0.650696I$ $a = -0.21022 + 1.47307I$ $b = 1.250280 + 0.142199I$	$5.58852 + 5.07025I$	$11.97391 - 5.86575I$
$u = -0.947893 - 0.650696I$ $a = -0.21022 - 1.47307I$ $b = 1.250280 - 0.142199I$	$5.58852 - 5.07025I$	$11.97391 + 5.86575I$
$u = 0.544687 + 1.115460I$ $a = 0.171496 + 0.032811I$ $b = -1.82545 - 0.04307I$	$-13.8936 + 3.7790I$	$16.4732 - 0.8824I$
$u = 0.544687 - 1.115460I$ $a = 0.171496 - 0.032811I$ $b = -1.82545 + 0.04307I$	$-13.8936 - 3.7790I$	$16.4732 + 0.8824I$
$u = 1.006720 + 0.738523I$ $a = -0.027411 - 1.413620I$ $b = 0.601135 - 0.505413I$	$6.00828 - 6.40238I$	$12.19839 + 6.95987I$
$u = 1.006720 - 0.738523I$ $a = -0.027411 + 1.413620I$ $b = 0.601135 + 0.505413I$	$6.00828 + 6.40238I$	$12.19839 - 6.95987I$
$u = 1.000710 + 0.748113I$ $a = 0.18239 + 1.58644I$ $b = -1.80123 + 0.03491I$	$16.8362 - 5.8723I$	$12.48696 + 4.57611I$
$u = 1.000710 - 0.748113I$ $a = 0.18239 - 1.58644I$ $b = -1.80123 - 0.03491I$	$16.8362 + 5.8723I$	$12.48696 - 4.57611I$
$u = -1.124230 + 0.767226I$ $a = -0.28369 - 1.52440I$ $b = -1.290050 - 0.256043I$	$12.1250 + 9.0916I$	$14.3993 - 5.8572I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.124230-0.767226I$ $a=-0.28369+1.52440I$ $b=-1.290050+0.256043I$	$12.1250-9.0916I$	$14.3993+5.8572I$
$u=\ \ 1.20486+0.78616I$ $a=\ \ 0.47352-1.57215I$ $b=\ \ 1.81036-0.06682I$	$-15.9680-10.6007I$	$14.6369+4.9142I$
$u=\ \ 1.20486-0.78616I$ $a=\ \ 0.47352+1.57215I$ $b=\ \ 1.81036+0.06682I$	$-15.9680+10.6007I$	$14.6369-4.9142I$
$u=\ \ 0.539518$ $a=-0.734615$ $b=\ \ 0.400542$	0.694972	14.9110
$u=-0.373488$ $a=\ \ 4.17778$ $b=\ \ 1.71576$	14.6126	18.3610

II. $\boldsymbol{I_2^u = \langle u^3 + b - u,\ a + u,\ u^9 - 3u^7 + u^6 + 3u^5 - 2u^4 - 3u^3 + u^2 + 2u - 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 14$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9+6u^8+15u^7+25u^6+35u^5+36u^4+27u^3+17u^2+6u+1$
c_2, c_6, c_7 c_8, c_{12}	$u^9-3u^7+u^6+3u^5-2u^4-3u^3+u^2+2u-1$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$(u^3-u^2-2u+1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^9 - 6y^8 - 5y^7 + 47y^6 + 43y^5 - 88y^4 - 125y^3 - 37y^2 + 2y - 1$
c_2, c_6, c_7 c_8, c_{12}	$y^9 - 6y^8 + 15y^7 - 25y^6 + 35y^5 - 36y^4 + 27y^3 - 17y^2 + 6y - 1$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$(y^3 - 5y^2 + 6y - 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.689884 + 0.654080I$ $a = 0.689884 - 0.654080I$ $b = -1.24698$	6.34475	14.0000
$u = -0.689884 - 0.654080I$ $a = 0.689884 + 0.654080I$ $b = -1.24698$	6.34475	14.0000
$u = 0.743582 + 0.811631I$ $a = -0.743582 - 0.811631I$ $b = 1.80194$	17.6243	14.0000
$u = 0.743582 - 0.811631I$ $a = -0.743582 + 0.811631I$ $b = 1.80194$	17.6243	14.0000
$u = -1.17430$ $a = 1.17430$ $b = 0.445042$	0.704972	14.0000
$u = 1.37977$ $a = -1.37977$ $b = -1.24698$	6.34475	14.0000
$u = 0.587151 + 0.185036I$ $a = -0.587151 - 0.185036I$ $b = 0.445042$	0.704972	14.0000
$u = 0.587151 - 0.185036I$ $a = -0.587151 + 0.185036I$ $b = 0.445042$	0.704972	14.0000
$u = -1.48716$ $a = 1.48716$ $b = 1.80194$	17.6243	14.0000

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -0.732051$ $b = -1.73205$	13.1595	12.0000
$u = -1.00000$ $a = \quad 2.73205$ $b = \quad 1.73205$	13.1595	12.0000

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

(i) Arc colorings

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

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

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

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

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

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

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

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

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

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000		
$a =$	0	3.28987	12.0000
$b =$	1.00000		

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

(i) Arc colorings

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

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

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

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

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

$$a_8 = \begin{pmatrix} 3 \\ 2 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$

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

$$a_5 = \begin{pmatrix} 2 \\ 1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -2.00000$ $b = -1.00000$	3.28987	12.0000

VI. $I_6^u = \langle b-1,\ a-1,\ u-1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_6^u		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000		
$a =$	1.00000	1.64493	6.00000
$b =$	1.00000		

VII. $I_7^u = \langle b,\ a-1,\ u+1\rangle$

(i) Arc colorings

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

(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_5 c_9, c_{10}, c_{11}	u
c_6, c_7, c_8	$u + 1$

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_7^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = \ \ 1.00000$ $b = \qquad 0$	0	0

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

(i) Arc colorings

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

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

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

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

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

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

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

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

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

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

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

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 18$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = \quad 0$ $b = -1.00000$	4.93480	18.0000

IX. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u(u-1)^5(u+1)$ $\cdot (u^9+6u^8+15u^7+25u^6+35u^5+36u^4+27u^3+17u^2+6u+1)$ $\cdot (u^{25}+7u^{24}+\cdots+739u+49)$
c_2	$u(u-1)^4(u+1)^2(u^9-3u^7+u^6+3u^5-2u^4-3u^3+u^2+2u-1)$ $\cdot (u^{25}-u^{24}+\cdots-9u-7)$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$u(u-1)^2(u+1)^2(u^2-3)(u^3-u^2-2u+1)^3$ $\cdot (u^{25}+2u^{24}+\cdots+2u+2)$
c_6	$u(u-1)^3(u+1)^3(u^9-3u^7+u^6+3u^5-2u^4-3u^3+u^2+2u-1)$ $\cdot (u^{25}-u^{24}+\cdots-9u-7)$
c_7, c_8	$u(u-1)^2(u+1)^4(u^9-3u^7+u^6+3u^5-2u^4-3u^3+u^2+2u-1)$ $\cdot (u^{25}+u^{24}+\cdots+39u-9)$
c_{12}	$u(u-1)^3(u+1)^3(u^9-3u^7+u^6+3u^5-2u^4-3u^3+u^2+2u-1)$ $\cdot (u^{25}+u^{24}+\cdots+39u-9)$

X. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y(y-1)^6$ $\cdot(y^9-6y^8-5y^7+47y^6+43y^5-88y^4-125y^3-37y^2+2y-1)$ $\cdot(y^{25}+29y^{24}+\cdots+138539y-2401)$
c_2, c_6	$y(y-1)^6$ $\cdot(y^9-6y^8+15y^7-25y^6+35y^5-36y^4+27y^3-17y^2+6y-1)$ $\cdot(y^{25}-7y^{24}+\cdots+739y-49)$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y(y-3)^2(y-1)^4(y^3-5y^2+6y-1)^3$ $\cdot(y^{25}-36y^{24}+\cdots+147y^2-4)$
c_7, c_8, c_{12}	$y(y-1)^6$ $\cdot(y^9-6y^8+15y^7-25y^6+35y^5-36y^4+27y^3-17y^2+6y-1)$ $\cdot(y^{25}-31y^{24}+\cdots+1755y-81)$