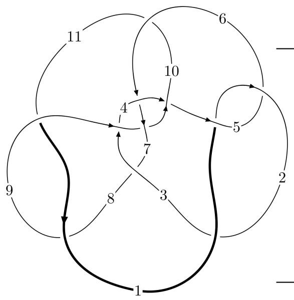
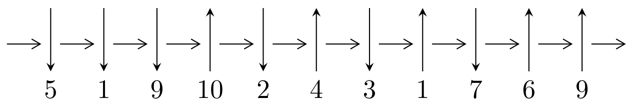
$11n_{94}$ ($K11n_{94}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I^u_1 = \langle 16u^{18} - 65u^{17} + \cdots + 39b + 33,\ -20u^{18} + 91u^{17} + \cdots + 39a - 129,\ u^{19} - 5u^{18} + \cdots + 10u^2 - 3\rangle$$
$$I^u_2 = \langle u^9 + 2u^8 - 4u^6 - 2u^5 + 4u^4 + 3u^3 - u^2 + b + 1,\ -u^9 - 2u^8 + u^7 + 5u^6 + u^5 - 7u^4 - 3u^3 + 4u^2 + a + u - 2$$
$$u^{10} + 2u^9 - 4u^7 - 2u^6 + 4u^5 + 4u^4 - u^3 - u^2 + u + 1\rangle$$
$$I^u_3 = \langle -2u^9 - 3u^8 - u^7 + 5u^6 - 3u^4 - u^2a - 2u^3 - au + 6u^2 + b - 2u - 3,\ -3u^9a + 2u^9 + \cdots - 4a + 2,$$
$$u^{10} + 2u^9 + u^8 - 3u^7 - 2u^6 + 2u^5 + 3u^4 - 2u^3 - u^2 + 2u + 1\rangle$$
$$I^u_4 = \langle b - 1,\ a^2 - a - 1,\ u - 1\rangle$$

$$I^v_1 = \langle a,\ b - 1,\ v - 1\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 52 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. $I^u_1 = \langle 16u^{18} - 65u^{17} + \cdots + 39b + 33,\ -20u^{18} + 91u^{17} + \cdots + 39a - 129,\ u^{19} - 5u^{18} + \cdots + 10u^2 - 3\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.512821u^{18} - 2.33333u^{17} + \cdots + 2.12821u + 3.30769 \\ -0.410256u^{18} + 1.66667u^{17} + \cdots - 1.76923u - 0.846154 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.923077u^{18} - 4u^{17} + \cdots + 3.89744u + 4.15385 \\ -0.410256u^{18} + 1.66667u^{17} + \cdots - 1.76923u - 0.846154 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{5}{39}u^{18} - u^{17} + \cdots + \frac{50}{39}u + \frac{27}{13} \\ 0.153846u^{18} - 0.794872u^{16} + \cdots - 2.46154u - 0.307692 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1.10256u^{18} - 8u^{17} + \cdots + 7.35897u + 10.4615 \\ -3.94872u^{18} + 18.3333u^{17} + \cdots - 6.15385u - 10.7692 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.307692u^{18} + 2.66667u^{17} + \cdots - 3.41026u - 1.38462 \\ 6.20513u^{18} - 25.6667u^{17} + \cdots + 0.384615u + 11.9231 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.41026u^{18} - 5.33333u^{17} + \cdots - 1.56410u + 2.84615 \\ -1.12821u^{18} + 3.33333u^{17} + \cdots + 2.38462u + 0.923077 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.41026u^{18} - 5.33333u^{17} + \cdots - 1.56410u + 2.84615 \\ -1.12821u^{18} + 3.33333u^{17} + \cdots + 2.38462u + 0.923077 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{389}{39}u^{18} - \frac{140}{3}u^{17} + \cdots - \frac{38}{13}u + \frac{356}{13}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{19} + 5u^{18} + \cdots - 10u^2 + 3$
c_2	$u^{19} + 5u^{18} + \cdots + 60u + 9$
c_3	$u^{19} + 8u^{17} + \cdots - u + 5$
c_4, c_6	$u^{19} + u^{18} + \cdots + 4u + 1$
c_7	$u^{19} + 20u^{17} + \cdots + 3u + 1$
c_8, c_{11}	$u^{19} - 18u^{17} + \cdots + 13u + 1$
c_9	$u^{19} - 14u^{18} + \cdots - 30u + 3$
c_{10}	$u^{19} - 21u^{18} + \cdots - 1792u + 512$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{19} - 5y^{18} + \cdots + 60y - 9$
c_2	$y^{19} + 23y^{18} + \cdots - 1872y - 81$
c_3	$y^{19} + 16y^{18} + \cdots - 109y - 25$
c_4, c_6	$y^{19} - 7y^{18} + \cdots + 16y - 1$
c_7	$y^{19} + 40y^{18} + \cdots + 7y - 1$
c_8, c_{11}	$y^{19} - 36y^{18} + \cdots + 39y - 1$
c_9	$y^{19} + 38y^{17} + \cdots + 42y - 9$
c_{10}	$y^{19} - 9y^{18} + \cdots + 2162688y - 262144$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.350966 + 0.908273I$ $a = 0.497187 - 0.151368I$ $b = -0.408408 - 0.715459I$	$2.38098 - 2.19136I$	$4.02486 + 1.79521I$
$u = -0.350966 - 0.908273I$ $a = 0.497187 + 0.151368I$ $b = -0.408408 + 0.715459I$	$2.38098 + 2.19136I$	$4.02486 - 1.79521I$
$u = -0.779496 + 0.468978I$ $a = -0.091107 + 0.590275I$ $b = 0.602057 + 0.798290I$	$0.99904 + 3.33102I$	$2.55789 - 7.26755I$
$u = -0.779496 - 0.468978I$ $a = -0.091107 - 0.590275I$ $b = 0.602057 - 0.798290I$	$0.99904 - 3.33102I$	$2.55789 + 7.26755I$
$u = 1.077080 + 0.271096I$ $a = 0.401351 + 0.468581I$ $b = -0.142788 + 0.130045I$	$-2.28578 - 0.47591I$	$-3.82840 + 3.46313I$
$u = 1.077080 - 0.271096I$ $a = 0.401351 - 0.468581I$ $b = -0.142788 - 0.130045I$	$-2.28578 + 0.47591I$	$-3.82840 - 3.46313I$
$u = 0.761451$ $a = 1.02355$ $b = -0.185922$	-1.28421	-7.36270
$u = 0.898363 + 0.894383I$ $a = -1.77752 - 0.80237I$ $b = 2.15592 - 0.55152I$	$8.84727 - 4.55297I$	$5.83723 + 8.19473I$
$u = 0.898363 - 0.894383I$ $a = -1.77752 + 0.80237I$ $b = 2.15592 + 0.55152I$	$8.84727 + 4.55297I$	$5.83723 - 8.19473I$
$u = 0.956723 + 0.863236I$ $a = -1.21407 - 1.44574I$ $b = 2.09496 + 0.17987I$	$8.65502 - 1.95883I$	$4.78017 - 2.64502I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.956723 - 0.863236I$ $a = -1.21407 + 1.44574I$ $b = 2.09496 - 0.17987I$	$8.65502 + 1.95883I$	$4.78017 + 2.64502I$
$u = -1.200480 + 0.502359I$ $a = -0.256728 - 0.089743I$ $b = -0.766723 + 0.224201I$	$-0.51529 + 7.49251I$	$1.46560 - 6.64058I$
$u = -1.200480 - 0.502359I$ $a = -0.256728 + 0.089743I$ $b = -0.766723 - 0.224201I$	$-0.51529 - 7.49251I$	$1.46560 + 6.64058I$
$u = 0.869568 + 1.036960I$ $a = 1.19820 + 0.93760I$ $b = -2.14294 - 0.19617I$	$10.89150 + 6.89079I$	$1.93588 - 3.17270I$
$u = 0.869568 - 1.036960I$ $a = 1.19820 - 0.93760I$ $b = -2.14294 + 0.19617I$	$10.89150 - 6.89079I$	$1.93588 + 3.17270I$
$u = 1.063600 + 0.913849I$ $a = 1.35608 + 1.04713I$ $b = -2.11940 + 0.59325I$	$10.2390 - 14.0065I$	$0.95958 + 7.34096I$
$u = 1.063600 - 0.913849I$ $a = 1.35608 - 1.04713I$ $b = -2.11940 - 0.59325I$	$10.2390 + 14.0065I$	$0.95958 - 7.34096I$
$u = -0.415119 + 0.278912I$ $a = 0.874831 + 0.733477I$ $b = 0.820280 - 0.072764I$	$1.73128 - 0.06651I$	$5.44854 - 0.44003I$
$u = -0.415119 - 0.278912I$ $a = 0.874831 - 0.733477I$ $b = 0.820280 + 0.072764I$	$1.73128 + 0.06651I$	$5.44854 + 0.44003I$

II. $\boldsymbol{I_2^u = \langle u^9 + 2u^8 - 4u^6 - 2u^5 + 4u^4 + 3u^3 - u^2 + b + 1,\ -u^9 - 2u^8 + \cdots + a - 2,\ u^{10} + 2u^9 + \cdots + u + 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-u^2+1\\u^2\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}u^9 + 2u^8 - u^7 - 5u^6 - u^5 + 7u^4 + 3u^3 - 4u^2 - u + 2\\-u^9 - 2u^8 + 4u^6 + 2u^5 - 4u^4 - 3u^3 + u^2 - 1\end{pmatrix}$$
$$a_8 = \begin{pmatrix}2u^9 + 4u^8 - u^7 - 9u^6 - 3u^5 + 11u^4 + 6u^3 - 5u^2 - u + 3\\-u^9 - 2u^8 + 4u^6 + 2u^5 - 4u^4 - 3u^3 + u^2 - 1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u^9 + 2u^8 - u^7 - 5u^6 - u^5 + 6u^4 + 3u^3 - 3u^2 - u + 1\\-u^8 - u^7 + u^6 + 3u^5 - 3u^3 - u^2 + u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-u^9 - u^8 + 2u^7 + 3u^6 - 3u^5 - 4u^4 + 2u^3 + 3u^2 - 2u\\u^9 + u^8 - 2u^7 - 3u^6 + 2u^5 + 4u^4 - 2u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u^8 + u^7 - u^6 - 3u^5 + u^4 + 3u^3 + u^2 - u + 1\\-u^9 - u^8 + u^7 + 2u^6 - u^5 - 2u^4 + u^3 - 2u - 1\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-2u^9 - 2u^8 + 3u^7 + 6u^6 - 3u^5 - 8u^4 + 4u^2 - u - 1\\u^9 + u^8 - u^7 - 3u^6 + 3u^4 + 2u^3\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-2u^9 - 2u^8 + 3u^7 + 6u^6 - 3u^5 - 8u^4 + 4u^2 - u - 1\\u^9 + u^8 - u^7 - 3u^6 + 3u^4 + 2u^3\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^9 + 13u^8 - u^7 - 23u^6 - 11u^5 + 23u^4 + 15u^3 - 3u^2 + u + 5$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{10}+2u^9-4u^7-2u^6+4u^5+4u^4-u^3-u^2+u+1$
c_2	$u^{10}+4u^9+\cdots+3u+1$
c_3	$u^{10}+u^9+3u^8+2u^7+3u^6+u^5+3u^4+u^3+u^2+1$
c_4, c_6	$u^{10}+u^8-u^7+3u^6-u^5+3u^4-2u^3+3u^2-u+1$
c_5	$u^{10}-2u^9+4u^7-2u^6-4u^5+4u^4+u^3-u^2-u+1$
c_7	$u^{10}+u^9+3u^8-8u^6+3u^5+9u^4+6u^3+9u^2+4u+1$
c_8	$u^{10}+5u^9+11u^8+18u^7+23u^6+21u^5+19u^4+11u^3+7u^2+2u+1$
c_9	$u^{10}+5u^9+11u^8+10u^7-5u^6-23u^5-21u^4+u^3+18u^2+15u+5$
c_{10}	$u^{10}+3u^9-11u^7-14u^6+4u^5+20u^4+14u^3+5u^2+2u+1$
c_{11}	$u^{10}-5u^9+11u^8-18u^7+23u^6-21u^5+19u^4-11u^3+7u^2-2u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{10} - 4y^9 + \cdots - 3y + 1$
c_2	$y^{10} + 8y^9 + \cdots + 13y + 1$
c_3	$y^{10} + 5y^9 + 11y^8 + 18y^7 + 23y^6 + 21y^5 + 19y^4 + 11y^3 + 7y^2 + 2y + 1$
c_4, c_6	$y^{10} + 2y^9 + 7y^8 + 11y^7 + 19y^6 + 21y^5 + 23y^4 + 18y^3 + 11y^2 + 5y + 1$
c_7	$y^{10} + 5y^9 + \cdots + 2y + 1$
c_8, c_{11}	$y^{10} - 3y^9 + \cdots + 10y + 1$
c_9	$y^{10} - 3y^9 + \cdots - 45y + 25$
c_{10}	$y^{10} - 9y^9 + \cdots + 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.032960 + 0.512793I$ $a = -0.926519 - 0.444783I$ $b = -0.031024 + 0.608247I$	$-1.82490 + 7.04514I$	$-4.29839 - 6.63243I$
$u = -1.032960 - 0.512793I$ $a = -0.926519 + 0.444783I$ $b = -0.031024 - 0.608247I$	$-1.82490 - 7.04514I$	$-4.29839 + 6.63243I$
$u = 1.081750 + 0.414901I$ $a = 0.291782 + 0.133729I$ $b = 0.431318 + 0.661100I$	$-2.42349 + 0.47280I$	$-4.60679 - 3.67832I$
$u = 1.081750 - 0.414901I$ $a = 0.291782 - 0.133729I$ $b = 0.431318 - 0.661100I$	$-2.42349 - 0.47280I$	$-4.60679 + 3.67832I$
$u = -0.620721 + 0.483253I$ $a = 0.78365 + 1.55026I$ $b = -0.186622 - 0.818442I$	$-0.43993 - 2.89386I$	$-0.09413 + 2.87221I$
$u = -0.620721 - 0.483253I$ $a = 0.78365 - 1.55026I$ $b = -0.186622 + 0.818442I$	$-0.43993 + 2.89386I$	$-0.09413 - 2.87221I$
$u = 0.517593 + 0.494789I$ $a = -0.808469 - 0.682785I$ $b = 0.250433 - 1.183290I$	$-0.42431 - 4.26902I$	$-1.08356 + 8.09272I$
$u = 0.517593 - 0.494789I$ $a = -0.808469 + 0.682785I$ $b = 0.250433 + 1.183290I$	$-0.42431 + 4.26902I$	$-1.08356 - 8.09272I$
$u = -0.945660 + 0.933377I$ $a = -1.34045 + 0.96068I$ $b = 2.03589 + 0.22886I$	$8.40249 + 3.42159I$	$1.58287 - 2.15087I$
$u = -0.945660 - 0.933377I$ $a = -1.34045 - 0.96068I$ $b = 2.03589 - 0.22886I$	$8.40249 - 3.42159I$	$1.58287 + 2.15087I$

III.

$\boldsymbol{I_3^u = \langle -2u^9-3u^8+\cdots+b-3,\ -3u^9a+2u^9+\cdots-4a+2,\ u^{10}+2u^9+\cdots+2u+1\rangle}$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix}a\\2u^9+3u^8+u^7-5u^6+3u^4+u^2a+2u^3+au-6u^2+2u+3\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-2u^9-3u^8-u^7+5u^6-3u^4-u^2a-2u^3-au+6u^2+a-2u-3\\2u^9+3u^8+u^7-5u^6+3u^4+u^2a+2u^3+au-6u^2+2u+3\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-u^9-2u^8-u^7+3u^6+2u^5-u^3a-u^4-u^2a-2u^3+2u^2+a-1\\3u^9+5u^8+\cdots+2u+4\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}u^9a+u^9+\cdots+2a+1\\-u^9a-2u^9+\cdots-a-3\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}u^9a+u^9+\cdots+2a+1\\-u^9a-2u^9+\cdots-a-3\end{pmatrix}$$

$$a_4 = \begin{pmatrix}2u^9+3u^8+\cdots-a+3\\-u^9a-2u^9+\cdots-a-3\end{pmatrix}$$

$$a_4 = \begin{pmatrix}2u^9+3u^8+\cdots-a+3\\-u^9a-2u^9+\cdots-a-3\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -11u^9-17u^8+37u^6+3u^5-35u^4-20u^3+38u^2-3u-23$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{10} - 2u^9 + u^8 + 3u^7 - 2u^6 - 2u^5 + 3u^4 + 2u^3 - u^2 - 2u + 1)^2$
c_2	$(u^{10} + 2u^9 + 9u^8 + 15u^7 + 28u^6 + 36u^5 + 35u^4 + 22u^3 + 15u^2 + 6u + 1)^2$
c_3	$u^{20} + 2u^{19} + \cdots - 301u + 457$
c_4, c_6	$u^{20} + 2u^{19} + \cdots - 5u + 5$
c_7	$u^{20} + 12u^{18} + \cdots - 989u + 1201$
c_8, c_{11}	$u^{20} - 3u^{19} + \cdots + 410u + 55$
c_9	$(u^{10} + 3u^9 + 6u^8 + 7u^7 + 9u^6 + 9u^5 + 10u^4 + 6u^3 + 5u^2 + 3u + 2)^2$
c_{10}	$(u + 1)^{20}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{10} - 2y^9 + 9y^8 - 15y^7 + 28y^6 - 36y^5 + 35y^4 - 22y^3 + 15y^2 - 6y + 1)^2$
c_2	$(y^{10} + 14y^9 + \cdots - 6y + 1)^2$
c_3	$y^{20} + 12y^{19} + \cdots - 305391y + 208849$
c_4, c_6	$y^{20} + 28y^{18} + \cdots - 275y + 25$
c_7	$y^{20} + 24y^{19} + \cdots - 10199399y + 1442401$
c_8, c_{11}	$y^{20} - 23y^{19} + \cdots - 8050y + 3025$
c_9	$(y^{10} + 3y^9 + \cdots + 11y + 4)^2$
c_{10}	$(y - 1)^{20}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.975430 + 0.320615I$ $a = 0.583170 - 0.332488I$ $b = -0.819443 + 0.010673I$	$-0.581891 + 0.600845I$	$-1.31849 - 3.40041I$
$u = 0.975430 + 0.320615I$ $a = 1.43037 - 0.39642I$ $b = 0.786422 + 0.695571I$	$-0.581891 + 0.600845I$	$-1.31849 - 3.40041I$
$u = 0.975430 - 0.320615I$ $a = 0.583170 + 0.332488I$ $b = -0.819443 - 0.010673I$	$-0.581891 - 0.600845I$	$-1.31849 + 3.40041I$
$u = 0.975430 - 0.320615I$ $a = 1.43037 + 0.39642I$ $b = 0.786422 - 0.695571I$	$-0.581891 - 0.600845I$	$-1.31849 + 3.40041I$
$u = 0.541733 + 0.670646I$ $a = -1.108000 + 0.503913I$ $b = 0.88831 - 1.63472I$	$1.08979 - 4.58635I$	$4.20678 + 7.42430I$
$u = 0.541733 + 0.670646I$ $a = -0.11061 + 1.52297I$ $b = -0.151145 + 0.151691I$	$1.08979 - 4.58635I$	$4.20678 + 7.42430I$
$u = 0.541733 - 0.670646I$ $a = -1.108000 - 0.503913I$ $b = 0.88831 + 1.63472I$	$1.08979 + 4.58635I$	$4.20678 - 7.42430I$
$u = 0.541733 - 0.670646I$ $a = -0.11061 - 1.52297I$ $b = -0.151145 - 0.151691I$	$1.08979 + 4.58635I$	$4.20678 - 7.42430I$
$u = -0.876556 + 1.026090I$ $a = -1.059400 + 0.874691I$ $b = 2.32466 - 0.31720I$	$9.46664 + 1.75340I$	$5.39474 + 0.85033I$
$u = -0.876556 + 1.026090I$ $a = 1.32869 - 0.69669I$ $b = -1.66238 - 0.33815I$	$9.46664 + 1.75340I$	$5.39474 + 0.85033I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.876556 - 1.026090I$ $a = -1.059400 - 0.874691I$ $b = 2.32466 + 0.31720I$	$9.46664 - 1.75340I$	$5.39474 - 0.85033I$
$u = -0.876556 - 1.026090I$ $a = 1.32869 + 0.69669I$ $b = -1.66238 + 0.33815I$	$9.46664 - 1.75340I$	$5.39474 - 0.85033I$
$u = -0.580680 + 0.133301I$ $a = 1.356460 + 0.199192I$ $b = -0.57404 + 1.29815I$	$-1.56776 + 3.93250I$	$-8.27914 - 6.71393I$
$u = -0.580680 + 0.133301I$ $a = -2.24080 + 1.97323I$ $b = 0.403939 + 0.912038I$	$-1.56776 + 3.93250I$	$-8.27914 - 6.71393I$
$u = -0.580680 - 0.133301I$ $a = 1.356460 - 0.199192I$ $b = -0.57404 - 1.29815I$	$-1.56776 - 3.93250I$	$-8.27914 + 6.71393I$
$u = -0.580680 - 0.133301I$ $a = -2.24080 - 1.97323I$ $b = 0.403939 - 0.912038I$	$-1.56776 - 3.93250I$	$-8.27914 + 6.71393I$
$u = -1.059930 + 0.922349I$ $a = 1.041530 - 0.882518I$ $b = -1.74793 - 0.01501I$	$8.86503 + 5.36397I$	$3.49612 - 6.50559I$
$u = -1.059930 + 0.922349I$ $a = -1.22140 + 1.07135I$ $b = 2.05160 + 0.78425I$	$8.86503 + 5.36397I$	$3.49612 - 6.50559I$
$u = -1.059930 - 0.922349I$ $a = 1.041530 + 0.882518I$ $b = -1.74793 + 0.01501I$	$8.86503 - 5.36397I$	$3.49612 + 6.50559I$
$u = -1.059930 - 0.922349I$ $a = -1.22140 - 1.07135I$ $b = 2.05160 - 0.78425I$	$8.86503 - 5.36397I$	$3.49612 + 6.50559I$

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

(i) Arc colorings

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

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

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

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

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

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

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

$$a_7 = \begin{pmatrix} a-1 \\ -a+2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} a+1 \\ 1 \end{pmatrix}$$

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -0.618034$ $b = 1.00000$	0	5.00000
$u = 1.00000$ $a = 1.61803$ $b = 1.00000$	0	5.00000

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

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v		$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v =$	1.00000		
$a =$	0	1.64493	6.00000
$b =$	1.00000		

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u(u-1)^2$ $\cdot(u^{10}-2u^9+u^8+3u^7-2u^6-2u^5+3u^4+2u^3-u^2-2u+1)^2$ $\cdot(u^{10}+2u^9-4u^7-2u^6+4u^5+4u^4-u^3-u^2+u+1)$ $\cdot(u^{19}+5u^{18}+\cdots-10u^2+3)$
c_2	$u(u+1)^2$ $\cdot(u^{10}+2u^9+9u^8+15u^7+28u^6+36u^5+35u^4+22u^3+15u^2+6u+1)^2$ $\cdot(u^{10}+4u^9+\cdots+3u+1)(u^{19}+5u^{18}+\cdots+60u+9)$
c_3	$(u-1)(u^2+u-1)(u^{10}+u^9+\cdots+u^2+1)$ $\cdot(u^{19}+8u^{17}+\cdots-u+5)(u^{20}+2u^{19}+\cdots-301u+457)$
c_4, c_6	$(u-1)(u^2+u-1)(u^{10}+u^8+\cdots-u+1)$ $\cdot(u^{19}+u^{18}+\cdots+4u+1)(u^{20}+2u^{19}+\cdots-5u+5)$
c_5	$u(u+1)^2(u^{10}-2u^9+4u^7-2u^6-4u^5+4u^4+u^3-u^2-u+1)$ $\cdot(u^{10}-2u^9+u^8+3u^7-2u^6-2u^5+3u^4+2u^3-u^2-2u+1)^2$ $\cdot(u^{19}+5u^{18}+\cdots-10u^2+3)$
c_7	$(u-1)(u^2+u-1)(u^{10}+u^9+\cdots+4u+1)$ $\cdot(u^{19}+20u^{17}+\cdots+3u+1)(u^{20}+12u^{18}+\cdots-989u+1201)$
c_8	$(u-1)(u+1)^2$ $\cdot(u^{10}+5u^9+11u^8+18u^7+23u^6+21u^5+19u^4+11u^3+7u^2+2u+1)$ $\cdot(u^{19}-18u^{17}+\cdots+13u+1)(u^{20}-3u^{19}+\cdots+410u+55)$
c_9	$u^3(u^{10}+3u^9+6u^8+7u^7+9u^6+9u^5+10u^4+6u^3+5u^2+3u+2)^2$ $\cdot(u^{10}+5u^9+11u^8+10u^7-5u^6-23u^5-21u^4+u^3+18u^2+15u+5)$ $\cdot(u^{19}-14u^{18}+\cdots-30u+3)$
c_{10}	$(u-1)^3(u+1)^{20}$ $\cdot(u^{10}+3u^9-11u^7-14u^6+4u^5+20u^4+14u^3+5u^2+2u+1)$ $\cdot(u^{19}-21u^{18}+\cdots-1792u+512)$
c_{11}	$(u-1)^3$ $\cdot(u^{10}-5u^9+11u^8-18u^7+23u^6-21u^5+19u^4-11u^3+7u^2-2u+1)$ $\cdot(u^{19}-18u^{17}+\cdots+13u+1)(u^{20}-3u^{19}+\cdots+410u+55)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y(y-1)^2(y^{10}-4y^9+\cdots-3y+1)$ $\cdot(y^{10}-2y^9+9y^8-15y^7+28y^6-36y^5+35y^4-22y^3+15y^2-6y+1)^2$ $\cdot(y^{19}-5y^{18}+\cdots+60y-9)$
c_2	$y(y-1)^2(y^{10}+8y^9+\cdots+13y+1)(y^{10}+14y^9+\cdots-6y+1)^2$ $\cdot(y^{19}+23y^{18}+\cdots-1872y-81)$
c_3	$(y-1)(y^2-3y+1)$ $\cdot(y^{10}+5y^9+11y^8+18y^7+23y^6+21y^5+19y^4+11y^3+7y^2+2y+1)$ $\cdot(y^{19}+16y^{18}+\cdots-109y-25)$ $\cdot(y^{20}+12y^{19}+\cdots-305391y+208849)$
c_4, c_6	$(y-1)(y^2-3y+1)$ $\cdot(y^{10}+2y^9+7y^8+11y^7+19y^6+21y^5+23y^4+18y^3+11y^2+5y+1)$ $\cdot(y^{19}-7y^{18}+\cdots+16y-1)(y^{20}+28y^{18}+\cdots-275y+25)$
c_7	$(y-1)(y^2-3y+1)(y^{10}+5y^9+\cdots+2y+1)(y^{19}+40y^{18}+\cdots+7y-1)$ $\cdot(y^{20}+24y^{19}+\cdots-10199399y+1442401)$
c_8, c_{11}	$((y-1)^3)(y^{10}-3y^9+\cdots+10y+1)(y^{19}-36y^{18}+\cdots+39y-1)$ $\cdot(y^{20}-23y^{19}+\cdots-8050y+3025)$
c_9	$y^3(y^{10}-3y^9+\cdots-45y+25)(y^{10}+3y^9+\cdots+11y+4)^2$ $\cdot(y^{19}+38y^{17}+\cdots+42y-9)$
c_{10}	$((y-1)^{23})(y^{10}-9y^9+\cdots+6y+1)$ $\cdot(y^{19}-9y^{18}+\cdots+2162688y-262144)$