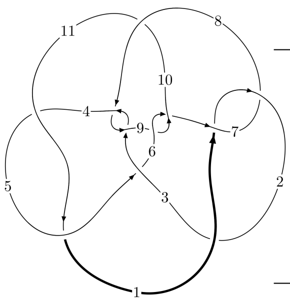
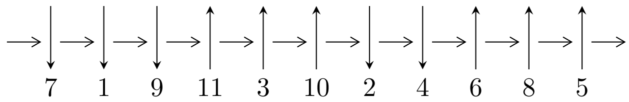
$11a_{232}$ $(K11a_{232})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -1.29642 \times 10^{17} u^{27} - 9.84068 \times 10^{16} u^{26} + \cdots + 1.77262 \times 10^{17} b - 9.04547 \times 10^{17}, \\
& 8.06637 \times 10^{17} u^{27} + 5.36595 \times 10^{17} u^{26} + \cdots + 7.09049 \times 10^{17} a + 6.30715 \times 10^{17},\ u^{28} + u^{27} + \cdots + 14u + 1 \\
I_2^u = \langle & 8.83675 \times 10^{38} u^{39} - 8.11011 \times 10^{37} u^{38} + \cdots + 1.46509 \times 10^{38} b - 1.09806 \times 10^{40}, \\
& -4.97706 \times 10^{40} u^{39} + 1.13228 \times 10^{40} u^{38} + \cdots + 2.49066 \times 10^{39} a + 8.16831 \times 10^{41}, \\
& u^{40} + u^{39} + \cdots + 62u - 17 \rangle \\
I_3^u = \langle & b - u,\ 4a^2 + 4au + 2a + u,\ u^2 + 1 \rangle \\
I_4^u = \langle & b,\ a + 1,\ u - 1 \rangle \\
I_5^u = \langle & 2b + 3a - 1,\ 9a^2 - 6a - 7,\ u + 1 \rangle
\end{aligned}$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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.
$\boldsymbol{I_1^u = \langle -1.30\times10^{17}u^{27} - 9.84\times10^{16}u^{26} + \cdots + 1.77\times10^{17}b - 9.05\times10^{17},\ 8.07\times10^{17}u^{27} + 5.37\times10^{17}u^{26} + \cdots + 7.09\times10^{17}a + 6.31\times10^{17},\ u^{28} + u^{27} + \cdots + 14u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}u\\-u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-1.13763u^{27} - 0.756780u^{26} + \cdots - 56.2473u - 0.889522\\0.731356u^{27} + 0.555147u^{26} + \cdots + 37.3554u + 5.10287\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-4.73051u^{27} - 4.00227u^{26} + \cdots - 238.602u - 33.2692\\0.00848632u^{27} - 0.147004u^{26} + \cdots - 4.43645u + 0.321958\end{pmatrix}$$
$$a_6 = \begin{pmatrix}3.99376u^{27} + 3.52913u^{26} + \cdots + 207.156u + 31.6346\\0.380852u^{27} + 0.222239u^{26} + \cdots + 15.0373u + 1.13763\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-4.57712u^{27} - 3.99984u^{26} + \cdots - 234.261u - 32.6359\\-0.0116520u^{27} - 0.0162144u^{26} + \cdots - 2.05596u + 0.804312\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.406276u^{27} - 0.201633u^{26} + \cdots - 18.8919u + 4.21335\\0.731356u^{27} + 0.555147u^{26} + \cdots + 37.3554u + 5.10287\end{pmatrix}$$
$$a_7 = \begin{pmatrix}3.64578u^{27} + 3.25367u^{26} + \cdots + 189.608u + 30.0323\\0.380288u^{27} + 0.344685u^{26} + \cdots + 18.3337u + 1.71038\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-1.60226u^{27} - 1.25428u^{26} + \cdots - 80.5253u - 4.88328\\0.572743u^{27} + 0.573307u^{26} + \cdots + 33.1611u + 4.72202\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-1.60226u^{27} - 1.25428u^{26} + \cdots - 80.5253u - 4.88328\\0.572743u^{27} + 0.573307u^{26} + \cdots + 33.1611u + 4.72202\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $=$
$\frac{33965909975637527}{11078896897135864}u^{27} + \frac{122607961560954003}{44315587588543456}u^{26} + \cdots + \frac{317099107758834 7389}{22157793794271728}u + \frac{1229656491980719955}{44315587588543456}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^{28} - 3u^{27} + \cdots + 14u - 10$
c_2	$u^{28} + 13u^{27} + \cdots - 404u + 100$
c_3, c_8	$u^{28} - 3u^{27} + \cdots + 170u - 26$
c_4, c_6, c_9 c_{11}	$u^{28} - u^{27} + \cdots - 14u + 1$
c_5, c_{10}	$16(16u^{28} + 48u^{27} + \cdots - 4u - 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y^{28} - 13y^{27} + \cdots + 404y + 100$
c_2	$y^{28} + 7y^{27} + \cdots - 672016y + 10000$
c_3, c_8	$y^{28} + 17y^{27} + \cdots + 8332y + 676$
c_4, c_6, c_9 c_{11}	$y^{28} - 19y^{27} + \cdots - 94y + 1$
c_5, c_{10}	$256(256y^{28} - 5248y^{27} + \cdots - 74y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.449964 + 0.955908I$ $a = 0.151228 - 0.563693I$ $b = -0.237420 + 1.011880I$	$-0.873376 - 0.763619I$	$-0.834378 - 1.006413I$
$u = -0.449964 - 0.955908I$ $a = 0.151228 + 0.563693I$ $b = -0.237420 - 1.011880I$	$-0.873376 + 0.763619I$	$-0.834378 + 1.006413I$
$u = 0.619030 + 0.625848I$ $a = -0.254904 - 0.940243I$ $b = -0.564972 + 0.419726I$	$-2.54273 + 3.94340I$	$-3.92883 - 8.11948I$
$u = 0.619030 - 0.625848I$ $a = -0.254904 + 0.940243I$ $b = -0.564972 - 0.419726I$	$-2.54273 - 3.94340I$	$-3.92883 + 8.11948I$
$u = 1.16749$ $a = 1.09598$ $b = -1.79695$	-0.740696	13.3630
$u = 0.197638 + 0.798678I$ $a = -0.160215 - 0.828722I$ $b = -0.165189 + 0.201586I$	$-1.59476 - 1.80480I$	$-5.09710 + 1.86642I$
$u = 0.197638 - 0.798678I$ $a = -0.160215 + 0.828722I$ $b = -0.165189 - 0.201586I$	$-1.59476 + 1.80480I$	$-5.09710 - 1.86642I$
$u = 0.737049$ $a = -0.944844$ $b = 1.11268$	-2.48664	-6.62100
$u = -1.279000 + 0.337291I$ $a = -0.47967 + 1.95384I$ $b = -0.47948 - 1.61552I$	$5.51780 - 7.86345I$	$5.31743 + 6.29867I$
$u = -1.279000 - 0.337291I$ $a = -0.47967 - 1.95384I$ $b = -0.47948 + 1.61552I$	$5.51780 + 7.86345I$	$5.31743 - 6.29867I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.343250 + 0.043119I$ $a = 0.13328 - 1.60960I$ $b = -0.76458 + 1.59693I$	$10.03540 - 2.66746I$	$10.12620 + 2.06407I$
$u = -1.343250 - 0.043119I$ $a = 0.13328 + 1.60960I$ $b = -0.76458 - 1.59693I$	$10.03540 + 2.66746I$	$10.12620 - 2.06407I$
$u = -1.326140 + 0.226084I$ $a = -0.460345 - 0.367905I$ $b = 1.374270 + 0.188673I$	$7.76911 - 3.65914I$	$8.46465 + 3.07912I$
$u = -1.326140 - 0.226084I$ $a = -0.460345 + 0.367905I$ $b = 1.374270 - 0.188673I$	$7.76911 + 3.65914I$	$8.46465 - 3.07912I$
$u = 1.320310 + 0.365382I$ $a = 0.305908 - 0.482073I$ $b = -1.262860 + 0.217604I$	$6.13143 + 10.28480I$	$5.46409 - 7.36805I$
$u = 1.320310 - 0.365382I$ $a = 0.305908 + 0.482073I$ $b = -1.262860 - 0.217604I$	$6.13143 - 10.28480I$	$5.46409 + 7.36805I$
$u = 1.399260 + 0.113511I$ $a = 0.13439 + 1.69651I$ $b = 0.64640 - 1.61358I$	$12.33890 + 4.05891I$	$10.87964 - 3.34376I$
$u = 1.399260 - 0.113511I$ $a = 0.13439 - 1.69651I$ $b = 0.64640 + 1.61358I$	$12.33890 - 4.05891I$	$10.87964 + 3.34376I$
$u = -0.351747 + 0.453003I$ $a = 0.576176 - 0.742859I$ $b = 0.246070 + 0.616533I$	$0.183505 - 1.179080I$	$2.03457 + 5.91305I$
$u = -0.351747 - 0.453003I$ $a = 0.576176 + 0.742859I$ $b = 0.246070 - 0.616533I$	$0.183505 + 1.179080I$	$2.03457 - 5.91305I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.47134 + 0.46584I$ $a = 0.62737 + 1.64310I$ $b = 0.52803 - 1.50973I$	$13.2391 + 10.1973I$	$8.61620 - 4.40012I$
$u = 1.47134 - 0.46584I$ $a = 0.62737 - 1.64310I$ $b = 0.52803 + 1.50973I$	$13.2391 - 10.1973I$	$8.61620 + 4.40012I$
$u = -1.45739 + 0.55230I$ $a = -0.73550 + 1.62993I$ $b = -0.51262 - 1.48286I$	$11.5116 - 16.4523I$	$6.49151 + 8.57137I$
$u = -1.45739 - 0.55230I$ $a = -0.73550 - 1.62993I$ $b = -0.51262 + 1.48286I$	$11.5116 + 16.4523I$	$6.49151 - 8.57137I$
$u = -0.11349 + 1.56139I$ $a = 0.012320 - 0.622298I$ $b = -0.039307 + 1.237680I$	$1.50736 + 2.52809I$	$9.13783 - 4.03367I$
$u = -0.11349 - 1.56139I$ $a = 0.012320 + 0.622298I$ $b = -0.039307 - 1.237680I$	$1.50736 - 2.52809I$	$9.13783 + 4.03367I$
$u = -0.138862 + 0.028897I$ $a = 6.57439 - 1.46045I$ $b = 0.073787 + 0.991855I$	$1.72032 - 2.04511I$	$7.95707 + 3.99629I$
$u = -0.138862 - 0.028897I$ $a = 6.57439 + 1.46045I$ $b = 0.073787 - 0.991855I$	$1.72032 + 2.04511I$	$7.95707 - 3.99629I$

II. $\boldsymbol{I_2^u = \langle 8.84 \times 10^{38}u^{39} - 8.11 \times 10^{37}u^{38} + \cdots + 1.47 \times 10^{38}b - 1.10 \times 10^{40},\ -4.98 \times 10^{40}u^{39} + 1.13 \times 10^{40}u^{38} + \cdots + 2.49 \times 10^{39}a + 8.17 \times 10^{41},\ u^{40} + u^{39} + \cdots + 62u - 17\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 19.9829u^{39} - 4.54610u^{38} + \cdots + 1425.22u - 327.958 \\ -6.03152u^{39} + 0.553556u^{38} + \cdots - 361.279u + 74.9478 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -2.14148u^{39} + 1.22331u^{38} + \cdots - 238.675u + 70.6524 \\ 9.32536u^{39} - 1.34018u^{38} + \cdots + 615.450u - 133.266 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 42.0817u^{39} - 10.6590u^{38} + \cdots + 3089.04u - 737.735 \\ -3.20706u^{39} - 0.115380u^{38} + \cdots - 141.669u + 19.2163 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 9.46024u^{39} - 0.795742u^{38} + \cdots + 543.626u - 105.550 \\ 5.22480u^{39} - 0.852228u^{38} + \cdots + 356.034u - 77.9153 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 13.9514u^{39} - 3.99254u^{38} + \cdots + 1063.94u - 253.010 \\ -6.03152u^{39} + 0.553556u^{38} + \cdots - 361.279u + 74.9478 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 21.9203u^{39} - 3.79830u^{38} + \cdots + 1464.70u - 321.059 \\ 1.20951u^{39} - 0.423156u^{38} + \cdots + 108.425u - 25.8667 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 46.8670u^{39} - 4.18670u^{38} + \cdots + 2852.32u - 583.520 \\ -7.30074u^{39} + 1.70611u^{38} + \cdots - 508.014u + 122.126 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 46.8670u^{39} - 4.18670u^{38} + \cdots + 2852.32u - 583.520 \\ -7.30074u^{39} + 1.70611u^{38} + \cdots - 508.014u + 122.126 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 41.4508u^{39} - 6.22688u^{38} + \cdots + 2767.85u - 602.998$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$(u^{20} + u^{19} + \cdots + 3u^2 - 1)^2$
c_2	$(u^{20} + 7u^{19} + \cdots + 6u + 1)^2$
c_3, c_8	$(u^{20} + u^{19} + \cdots + 2u - 1)^2$
c_4, c_6, c_9 c_{11}	$u^{40} - u^{39} + \cdots - 62u - 17$
c_5, c_{10}	$u^{40} - 5u^{39} + \cdots - 3518u + 8903$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^{20} - 7y^{19} + \cdots - 6y + 1)^2$
c_2	$(y^{20} + 13y^{19} + \cdots - 6y + 1)^2$
c_3, c_8	$(y^{20} + 17y^{19} + \cdots - 6y + 1)^2$
c_4, c_6, c_9 c_{11}	$y^{40} - 29y^{39} + \cdots - 2824y + 289$
c_5, c_{10}	$y^{40} - 25y^{39} + \cdots - 6761242056y + 79263409$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.044840 + 0.243936I$ $a = 0.43981 + 1.65317I$ $b = -0.201509 + 0.663357I$	$4.95641 + 2.35832I$	$5.64775 - 4.49783I$
$u = -1.044840 - 0.243936I$ $a = 0.43981 - 1.65317I$ $b = -0.201509 - 0.663357I$	$4.95641 - 2.35832I$	$5.64775 + 4.49783I$
$u = 1.101170 + 0.208325I$ $a = -2.01145 + 0.48533I$ $b = -0.201509 + 0.663357I$	$4.95641 + 2.35832I$	$5.64775 - 4.49783I$
$u = 1.101170 - 0.208325I$ $a = -2.01145 - 0.48533I$ $b = -0.201509 - 0.663357I$	$4.95641 - 2.35832I$	$5.64775 + 4.49783I$
$u = -1.13898$ $a = 0.459946$ $b = -0.358818$	2.60969	-2.76210
$u = -1.156830 + 0.007308I$ $a = 1.56319 + 2.12053I$ $b = 0.274747 - 1.069600I$	$4.55875 - 2.13456I$	$3.49102 + 2.16962I$
$u = -1.156830 - 0.007308I$ $a = 1.56319 - 2.12053I$ $b = 0.274747 + 1.069600I$	$4.55875 + 2.13456I$	$3.49102 - 2.16962I$
$u = -0.598773 + 0.548760I$ $a = -1.130270 - 0.298739I$ $b = -0.198534 - 1.239650I$	$6.05405 - 2.16136I$	$7.26252 + 3.31855I$
$u = -0.598773 - 0.548760I$ $a = -1.130270 + 0.298739I$ $b = -0.198534 + 1.239650I$	$6.05405 + 2.16136I$	$7.26252 - 3.31855I$
$u = -0.059958 + 0.789733I$ $a = 0.671566 + 0.796017I$ $b = 0.773104 + 0.153161I$	$1.80703 - 6.07240I$	$0.54715 + 5.87540I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.059958-0.789733I$ $a=\ \ 0.671566-0.796017I$ $b=\ \ 0.773104-0.153161I$	$1.80703+6.07240I$	$0.54715-5.87540I$
$u=-1.151180+0.376978I$ $a=\ \ 0.78707-1.80536I$ $b=\ \ 0.327541+1.260030I$	$1.63329-3.96853I$	$0.+3.79787I$
$u=-1.151180-0.376978I$ $a=\ \ 0.78707+1.80536I$ $b=\ \ 0.327541-1.260030I$	$1.63329+3.96853I$	$0.-3.79787I$
$u=-0.265136+1.197750I$ $a=-0.299881+0.427278I$ $b=-0.295567-1.352050I$	$7.72048-4.43308I$	$7.31630+0.I$
$u=-0.265136-1.197750I$ $a=-0.299881-0.427278I$ $b=-0.295567+1.352050I$	$7.72048+4.43308I$	$7.31630+0.I$
$u=-1.219460+0.187157I$ $a=\ \ 0.0698643-0.0332146I$ $b=-0.692333-0.156175I$	$2.96536-0.81573I$	0
$u=-1.219460-0.187157I$ $a=\ \ 0.0698643+0.0332146I$ $b=-0.692333+0.156175I$	$2.96536+0.81573I$	0
$u=\ \ 0.733960$ $a=-1.52495$ $b=-0.358818$	2.60969	-2.76210
$u=\ \ 0.616504+0.374474I$ $a=-0.258415+0.450813I$ $b=\ \ 0.772326$	-2.26801	$-4.44026+0.I$
$u=\ \ 0.616504-0.374474I$ $a=-0.258415-0.450813I$ $b=\ \ 0.772326$	-2.26801	$-4.44026+0.I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.046221 + 0.711923I$ $a = -0.345881 + 0.305536I$ $b = 0.327541 - 1.260030I$	$1.63329 + 3.96853I$	$0.10651 - 3.79787I$
$u = -0.046221 - 0.711923I$ $a = -0.345881 - 0.305536I$ $b = 0.327541 + 1.260030I$	$1.63329 - 3.96853I$	$0.10651 + 3.79787I$
$u = 0.094315 + 1.289960I$ $a = 0.241791 + 0.504558I$ $b = 0.328206 - 1.357610I$	$6.57229 + 10.05770I$	0
$u = 0.094315 - 1.289960I$ $a = 0.241791 - 0.504558I$ $b = 0.328206 + 1.357610I$	$6.57229 - 10.05770I$	0
$u = 1.240730 + 0.365535I$ $a = 0.0134609 + 0.0435217I$ $b = 0.773104 - 0.153161I$	$1.80703 + 6.07240I$	0
$u = 1.240730 - 0.365535I$ $a = 0.0134609 - 0.0435217I$ $b = 0.773104 + 0.153161I$	$1.80703 - 6.07240I$	0
$u = 1.307700 + 0.029974I$ $a = -0.28588 - 2.24493I$ $b = -0.198534 + 1.239650I$	$6.05405 + 2.16136I$	0
$u = 1.307700 - 0.029974I$ $a = -0.28588 + 2.24493I$ $b = -0.198534 - 1.239650I$	$6.05405 - 2.16136I$	0
$u = 0.245936 + 0.564099I$ $a = -1.06678 + 0.97261I$ $b = -0.692333 + 0.156175I$	$2.96536 + 0.81573I$	$2.32828 - 1.07888I$
$u = 0.245936 - 0.564099I$ $a = -1.06678 - 0.97261I$ $b = -0.692333 - 0.156175I$	$2.96536 - 0.81573I$	$2.32828 + 1.07888I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.509345 + 0.095450I$ $a = 2.70967 + 2.44353I$ $b = 0.274747 + 1.069600I$	$4.55875 + 2.13456I$	$3.49102 - 2.16962I$
$u = 0.509345 - 0.095450I$ $a = 2.70967 - 2.44353I$ $b = 0.274747 - 1.069600I$	$4.55875 - 2.13456I$	$3.49102 + 2.16962I$
$u = 1.56466 + 0.43256I$ $a = -0.46583 - 1.54438I$ $b = -0.295567 + 1.352050I$	$7.72048 + 4.43308I$	0
$u = 1.56466 - 0.43256I$ $a = -0.46583 + 1.54438I$ $b = -0.295567 - 1.352050I$	$7.72048 - 4.43308I$	0
$u = -1.54550 + 0.58408I$ $a = 0.55643 - 1.46280I$ $b = 0.328206 + 1.357610I$	$6.57229 - 10.05770I$	0
$u = -1.54550 - 0.58408I$ $a = 0.55643 + 1.46280I$ $b = 0.328206 - 1.357610I$	$6.57229 + 10.05770I$	0
$u = -1.48897 + 0.75285I$ $a = -0.601546 + 1.129320I$ $b = -0.022410 - 1.403750I$	$11.26460 - 2.84648I$	0
$u = -1.48897 - 0.75285I$ $a = -0.601546 - 1.129320I$ $b = -0.022410 + 1.403750I$	$11.26460 + 2.84648I$	0
$u = 1.59903 + 0.60741I$ $a = 0.504411 + 1.265840I$ $b = -0.022410 - 1.403750I$	$11.26460 - 2.84648I$	0
$u = 1.59903 - 0.60741I$ $a = 0.504411 - 1.265840I$ $b = -0.022410 + 1.403750I$	$11.26460 + 2.84648I$	0

III. $I_3^u = \langle b - u,\ 4a^2 + 4au + 2a + u,\ u^2 + 1 \rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -8a - 4u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7	$u^4 - u^2 + 1$
c_2	$(u^2 + u + 1)^2$
c_3, c_4, c_6 c_8, c_9, c_{11}	$(u^2 + 1)^2$
c_5, c_{10}	$16(16u^4 - 32u^3 + 20u^2 - 4u + 1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7	$(y^2 - y + 1)^2$
c_2	$(y^2 + y + 1)^2$
c_3, c_4, c_6 c_8, c_9, c_{11}	$(y + 1)^4$
c_5, c_{10}	$256(256y^4 - 384y^3 + 176y^2 + 24y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -0.250000 - 0.933013I$ $b = 1.000000I$	$-2.02988I$	$2.00000 + 3.46410I$
$u = 1.000000I$ $a = -0.250000 - 0.066987I$ $b = 1.000000I$	$2.02988I$	$2.00000 - 3.46410I$
$u = -1.000000I$ $a = -0.250000 + 0.933013I$ $b = -1.000000I$	$2.02988I$	$2.00000 - 3.46410I$
$u = -1.000000I$ $a = -0.250000 + 0.066987I$ $b = -1.000000I$	$-2.02988I$	$2.00000 + 3.46410I$

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

(i) Arc colorings

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

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

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

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

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

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

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

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

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

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

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

V. $I_5^u = \langle 2b + 3a - 1,\ 9a^2 - 6a - 7,\ u + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} a \\ -\frac{3}{2}a + \frac{1}{2} \end{pmatrix}$$
$$a_3 = \begin{pmatrix} \frac{1}{2}a + \frac{13}{6} \\ -2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -\frac{4}{3}a + \frac{4}{9} \\ a - \frac{2}{3} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{2}a + \frac{1}{6} \\ -2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{1}{2}a + \frac{1}{2} \\ -\frac{3}{2}a + \frac{1}{2} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -a \\ \frac{3}{2}a - \frac{1}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -\frac{1}{3}a + \frac{4}{9} \\ -\frac{1}{2}a - \frac{1}{6} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -\frac{1}{3}a + \frac{4}{9} \\ -\frac{1}{2}a - \frac{1}{6} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_7 c_8	$u^2 - 2$
c_2	$(u+2)^2$
c_4, c_9	$(u+1)^2$
c_5, c_{10}	$9(9u^2 - 6u - 1)$
c_6, c_{11}	$(u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7 c_8	$(y-2)^2$
c_2	$(y-4)^2$
c_4, c_6, c_9 c_{11}	$(y-1)^2$
c_5, c_{10}	$81(81y^2 - 54y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = 1.27614$ $b = -1.41421$	-1.64493	4.00000
$u = -1.00000$ $a = -0.609476$ $b = 1.41421$	-1.64493	4.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$u(u^2-2)(u^4-u^2+1)(u^{20}+u^{19}+\cdots+3u^2-1)^2$ $\cdot(u^{28}-3u^{27}+\cdots+14u-10)$
c_2	$u(u+2)^2(u^2+u+1)^2(u^{20}+7u^{19}+\cdots+6u+1)^2$ $\cdot(u^{28}+13u^{27}+\cdots-404u+100)$
c_3, c_8	$u(u^2-2)(u^2+1)^2(u^{20}+u^{19}+\cdots+2u-1)^2$ $\cdot(u^{28}-3u^{27}+\cdots+170u-26)$
c_4, c_9	$(u-1)(u+1)^2(u^2+1)^2(u^{28}-u^{27}+\cdots-14u+1)$ $\cdot(u^{40}-u^{39}+\cdots-62u-17)$
c_5, c_{10}	$2304(u-1)(9u^2-6u-1)(16u^4-32u^3+20u^2-4u+1)$ $\cdot(16u^{28}+48u^{27}+\cdots-4u-1)(u^{40}-5u^{39}+\cdots-3518u+8903)$
c_6, c_{11}	$((u-1)^2)(u+1)(u^2+1)^2(u^{28}-u^{27}+\cdots-14u+1)$ $\cdot(u^{40}-u^{39}+\cdots-62u-17)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7	$y(y-2)^2(y^2-y+1)^2(y^{20}-7y^{19}+\cdots-6y+1)^2$ $\cdot\,(y^{28}-13y^{27}+\cdots+404y+100)$
c_2	$y(y-4)^2(y^2+y+1)^2(y^{20}+13y^{19}+\cdots-6y+1)^2$ $\cdot\,(y^{28}+7y^{27}+\cdots-672016y+10000)$
c_3, c_8	$y(y-2)^2(y+1)^4(y^{20}+17y^{19}+\cdots-6y+1)^2$ $\cdot\,(y^{28}+17y^{27}+\cdots+8332y+676)$
c_4, c_6, c_9 c_{11}	$((y-1)^3)(y+1)^4(y^{28}-19y^{27}+\cdots-94y+1)$ $\cdot\,(y^{40}-29y^{39}+\cdots-2824y+289)$
c_5, c_{10}	$5308416(y-1)(81y^2-54y+1)(256y^4-384y^3+\cdots+24y+1)$ $\cdot\,(256y^{28}-5248y^{27}+\cdots-74y+1)$ $\cdot\,(y^{40}-25y^{39}+\cdots-6761242056y+79263409)$