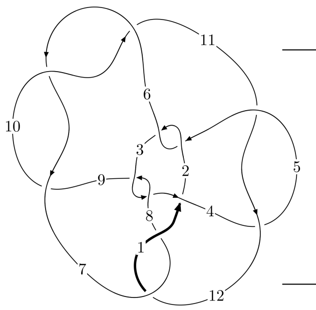
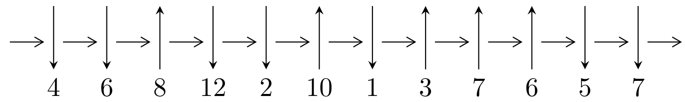
$12n_{0779}$ ($K12n_{0779}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 4.22623 \times 10^{207} u^{76} + 2.11947 \times 10^{207} u^{75} + \cdots + 3.97389 \times 10^{208} b - 1.15646 \times 10^{210}, \\
& - 9.18608 \times 10^{208} u^{76} + 1.21921 \times 10^{209} u^{75} + \cdots + 1.80256 \times 10^{210} a + 1.78378 \times 10^{212}, \\
& u^{77} - u^{76} + \cdots - 8509u + 567 \rangle \\
I_2^u = \langle & -457890480u^{16} + 960770667u^{15} + \cdots + 1926974837b - 992799855, \\
& 702672418u^{16} - 1377478673u^{15} + \cdots + 1926974837a + 650328159,\ u^{17} - u^{16} + \cdots - 4u^2 - 1 \rangle \\
I_3^u = \langle & 10a^3 - 22a^2 + 93b - 35a - 73,\ 2a^4 - 4a^3 + 7a^2 - 16a + 38,\ u + 1 \rangle \\
I_4^u = \langle & b + 1,\ a,\ u - 1 \rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 99 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. $\boldsymbol{I^u_1 = \langle 4.23 \times 10^{207} u^{76} + 2.12 \times 10^{207} u^{75} + \cdots + 3.97 \times 10^{208} b - 1.16 \times 10^{210},\ -9.19 \times 10^{208} u^{76} + 1.22 \times 10^{209} u^{75} + \cdots + 1.80 \times 10^{210} a + 1.78 \times 10^{212},\ u^{77} - u^{76} + \cdots - 8509u + 567\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0.0509614u^{76} - 0.0676378u^{75} + \cdots + 1110.35u - 98.9581 \\ -0.106350u^{76} - 0.0533348u^{75} + \cdots - 389.322u + 29.1014 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 0.0271559u^{76} - 0.0759271u^{75} + \cdots + 891.819u - 79.3123 \\ -0.134886u^{76} - 0.0541166u^{75} + \cdots - 648.919u + 47.2992 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.178718u^{76} + 0.0499083u^{75} + \cdots + 593.550u - 12.1865 \\ 0.0572808u^{76} - 0.0573505u^{75} + \cdots + 977.930u - 74.5360 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.235999u^{76} - 0.00744223u^{75} + \cdots + 1571.48u - 86.7225 \\ 0.0572808u^{76} - 0.0573505u^{75} + \cdots + 977.930u - 74.5360 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.0765354u^{76} + 0.0880012u^{75} + \cdots - 300.208u + 26.0873 \\ 0.241208u^{76} + 0.00575286u^{75} + \cdots + 1604.13u - 113.055 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.218018u^{76} - 0.108112u^{75} + \cdots - 529.500u + 20.8711 \\ -0.377977u^{76} - 0.0124606u^{75} + \cdots - 2608.00u + 184.881 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0.130908u^{76} - 0.113468u^{75} + \cdots + 1993.17u - 158.823 \\ -0.0311338u^{76} - 0.0916577u^{75} + \cdots + 452.432u - 32.2120 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.102566u^{76} + 0.101738u^{75} + \cdots - 1707.65u + 138.806 \\ -0.115613u^{76} + 0.0703324u^{75} + \cdots - 1447.07u + 102.159 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.120770u^{76} + 0.0653085u^{75} + \cdots - 1789.94u + 132.110$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{77} + 3u^{76} + \cdots + 140u + 346$
c_2, c_5	$u^{77} + u^{76} + \cdots - 31u + 3$
c_3, c_8	$2(2u^{77} + 2u^{76} + \cdots + 45046u + 10309)$
c_4, c_{11}	$2(2u^{77} + 2u^{76} + \cdots + 471u - 43)$
c_6, c_9, c_{10}	$u^{77} + 5u^{76} + \cdots - 2468u - 484$
c_7, c_{12}	$u^{77} + u^{76} + \cdots - 8509u - 567$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{77} - 37y^{76} + \cdots - 4707452y - 119716$
c_2, c_5	$y^{77} - 21y^{76} + \cdots + 409y - 9$
c_3, c_8	$4(4y^{77} + 168y^{76} + \cdots - 2.29225 \times 10^9 y - 1.06275 \times 10^8)$
c_4, c_{11}	$4(4y^{77} + 256y^{76} + \cdots + 124403y - 1849)$
c_6, c_9, c_{10}	$y^{77} + 37y^{76} + \cdots - 6355520y - 234256$
c_7, c_{12}	$y^{77} - 39y^{76} + \cdots + 38686993y - 321489$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.938209 + 0.312226I$ $a = 0.45931 - 2.81298I$ $b = 1.52471 - 1.03894I$	$2.27562 - 7.70600I$	$0. + 7.20128I$
$u = 0.938209 - 0.312226I$ $a = 0.45931 + 2.81298I$ $b = 1.52471 + 1.03894I$	$2.27562 + 7.70600I$	$0. - 7.20128I$
$u = -0.875995 + 0.508486I$ $a = 0.234153 - 0.075791I$ $b = -1.227120 - 0.007460I$	$4.70217 + 2.02568I$	0
$u = -0.875995 - 0.508486I$ $a = 0.234153 + 0.075791I$ $b = -1.227120 + 0.007460I$	$4.70217 - 2.02568I$	0
$u = 0.968192 + 0.304214I$ $a = -1.63274 + 0.04834I$ $b = -1.76494 - 0.36327I$	$-7.81512 - 1.26226I$	0
$u = 0.968192 - 0.304214I$ $a = -1.63274 - 0.04834I$ $b = -1.76494 + 0.36327I$	$-7.81512 + 1.26226I$	0
$u = 1.027380 + 0.057854I$ $a = 0.78772 - 2.37985I$ $b = -0.073315 - 0.605421I$	$-3.36769 + 0.25082I$	0
$u = 1.027380 - 0.057854I$ $a = 0.78772 + 2.37985I$ $b = -0.073315 + 0.605421I$	$-3.36769 - 0.25082I$	0
$u = -0.948305 + 0.407949I$ $a = -1.26321 + 1.04494I$ $b = -0.398633 + 0.309092I$	$-11.49710 + 1.71109I$	0
$u = -0.948305 - 0.407949I$ $a = -1.26321 - 1.04494I$ $b = -0.398633 - 0.309092I$	$-11.49710 - 1.71109I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.959314 + 0.022193I$ $a = 1.22069 + 1.56847I$ $b = 1.54319 + 0.33074I$	$-6.58460 + 0.13649I$	$-5.75334 + 0.I$
$u = -0.959314 - 0.022193I$ $a = 1.22069 - 1.56847I$ $b = 1.54319 - 0.33074I$	$-6.58460 - 0.13649I$	$-5.75334 + 0.I$
$u = 0.923083 + 0.484293I$ $a = -0.463349 - 1.321980I$ $b = 0.500175 - 0.128105I$	$-0.99244 - 2.07171I$	0
$u = 0.923083 - 0.484293I$ $a = -0.463349 + 1.321980I$ $b = 0.500175 + 0.128105I$	$-0.99244 + 2.07171I$	0
$u = 0.899833 + 0.326890I$ $a = 0.238006 + 0.627875I$ $b = -1.47701 - 0.22087I$	$3.35138 - 2.02606I$	$-4.52965 + 3.33898I$
$u = 0.899833 - 0.326890I$ $a = 0.238006 - 0.627875I$ $b = -1.47701 + 0.22087I$	$3.35138 + 2.02606I$	$-4.52965 - 3.33898I$
$u = -0.992418 + 0.445492I$ $a = -0.580562 - 0.013694I$ $b = 1.062590 + 0.247665I$	$2.95780 + 8.95105I$	0
$u = -0.992418 - 0.445492I$ $a = -0.580562 + 0.013694I$ $b = 1.062590 - 0.247665I$	$2.95780 - 8.95105I$	0
$u = -0.725676 + 0.550777I$ $a = -0.06755 - 1.94403I$ $b = -0.994099 + 0.120889I$	$5.16680 + 2.21914I$	$0. - 4.47673I$
$u = -0.725676 - 0.550777I$ $a = -0.06755 + 1.94403I$ $b = -0.994099 - 0.120889I$	$5.16680 - 2.21914I$	$0. + 4.47673I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.843064 + 0.306195I$ $a = -0.51976 + 2.78968I$ $b = -1.314680 + 0.442050I$	$3.57992 - 0.75133I$	$-4.75601 + 2.50232I$
$u = 0.843064 - 0.306195I$ $a = -0.51976 - 2.78968I$ $b = -1.314680 - 0.442050I$	$3.57992 + 0.75133I$	$-4.75601 - 2.50232I$
$u = 0.752154 + 0.821574I$ $a = -0.322071 - 0.198011I$ $b = 0.728252 - 0.076220I$	$-0.49074 - 2.82293I$	0
$u = 0.752154 - 0.821574I$ $a = -0.322071 + 0.198011I$ $b = 0.728252 + 0.076220I$	$-0.49074 + 2.82293I$	0
$u = -0.998042 + 0.507221I$ $a = -0.58775 + 1.79684I$ $b = 1.346440 + 0.328851I$	$-7.03814 + 2.18023I$	0
$u = -0.998042 - 0.507221I$ $a = -0.58775 - 1.79684I$ $b = 1.346440 - 0.328851I$	$-7.03814 - 2.18023I$	0
$u = 0.169868 + 1.114180I$ $a = -0.149610 - 0.014889I$ $b = 0.580965 - 0.761755I$	$-0.97528 - 3.93159I$	0
$u = 0.169868 - 1.114180I$ $a = -0.149610 + 0.014889I$ $b = 0.580965 + 0.761755I$	$-0.97528 + 3.93159I$	0
$u = 0.171394 + 0.835566I$ $a = -0.365723 - 0.425611I$ $b = -0.111115 + 0.835924I$	$0.31291 - 1.89067I$	$-2.93033 + 6.71981I$
$u = 0.171394 - 0.835566I$ $a = -0.365723 + 0.425611I$ $b = -0.111115 - 0.835924I$	$0.31291 + 1.89067I$	$-2.93033 - 6.71981I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.767276 + 0.368105I$ $a = 0.112383 - 0.385376I$ $b = 1.44666 + 0.61955I$	$2.76703 + 4.76841I$	$-4.31821 - 0.97191I$
$u = 0.767276 - 0.368105I$ $a = 0.112383 + 0.385376I$ $b = 1.44666 - 0.61955I$	$2.76703 - 4.76841I$	$-4.31821 + 0.97191I$
$u = 1.183130 + 0.022965I$ $a = -0.495265 + 1.183940I$ $b = 0.162733 + 0.572171I$	$-3.02318 + 0.57253I$	0
$u = 1.183130 - 0.022965I$ $a = -0.495265 - 1.183940I$ $b = 0.162733 - 0.572171I$	$-3.02318 - 0.57253I$	0
$u = -0.759001 + 0.917861I$ $a = 0.694257 + 0.208347I$ $b = -0.505991 - 0.128925I$	$2.22539 + 3.42962I$	0
$u = -0.759001 - 0.917861I$ $a = 0.694257 - 0.208347I$ $b = -0.505991 + 0.128925I$	$2.22539 - 3.42962I$	0
$u = -0.572263 + 0.566452I$ $a = 0.11489 + 2.09983I$ $b = 0.573464 - 0.556687I$	$4.23079 - 4.90882I$	$-1.40259 + 0.71127I$
$u = -0.572263 - 0.566452I$ $a = 0.11489 - 2.09983I$ $b = 0.573464 + 0.556687I$	$4.23079 + 4.90882I$	$-1.40259 - 0.71127I$
$u = -0.791326$ $a = 0.816501$ $b = 1.31849$	-2.71373	4.50760
$u = -0.502452 + 1.114780I$ $a = -0.336392 - 0.167540I$ $b = 0.650114 - 0.208442I$	$4.35830 - 3.10300I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.502452 - 1.114780I$ $a = -0.336392 + 0.167540I$ $b = 0.650114 + 0.208442I$	$4.35830 + 3.10300I$	0
$u = -1.225660 + 0.010183I$ $a = 0.73465 - 1.44720I$ $b = 1.24124 - 1.30163I$	$-5.20027 + 0.33103I$	0
$u = -1.225660 - 0.010183I$ $a = 0.73465 + 1.44720I$ $b = 1.24124 + 1.30163I$	$-5.20027 - 0.33103I$	0
$u = -1.052070 + 0.697529I$ $a = 0.419526 - 1.084380I$ $b = -0.458586 - 0.100923I$	$1.15545 + 2.60466I$	0
$u = -1.052070 - 0.697529I$ $a = 0.419526 + 1.084380I$ $b = -0.458586 + 0.100923I$	$1.15545 - 2.60466I$	0
$u = 0.350389 + 1.238280I$ $a = 0.302433 + 0.241715I$ $b = -1.22154 - 1.18957I$	$2.33286 + 10.04200I$	0
$u = 0.350389 - 1.238280I$ $a = 0.302433 - 0.241715I$ $b = -1.22154 + 1.18957I$	$2.33286 - 10.04200I$	0
$u = -0.017094 + 0.709812I$ $a = -0.015725 - 0.612293I$ $b = -0.661442 + 0.724504I$	$0.87207 - 1.63589I$	$0.91062 + 1.99464I$
$u = -0.017094 - 0.709812I$ $a = -0.015725 + 0.612293I$ $b = -0.661442 - 0.724504I$	$0.87207 + 1.63589I$	$0.91062 - 1.99464I$
$u = 0.586195 + 1.206420I$ $a = -0.447297 - 0.365209I$ $b = 1.47980 + 0.94082I$	$3.06796 + 1.94916I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.586195 - 1.206420I$ $a = -0.447297 + 0.365209I$ $b = 1.47980 - 0.94082I$	$3.06796 - 1.94916I$	0
$u = 1.053630 + 0.836247I$ $a = 0.801184 + 1.091560I$ $b = -1.45091 + 0.28853I$	$-8.65792 - 3.32546I$	0
$u = 1.053630 - 0.836247I$ $a = 0.801184 - 1.091560I$ $b = -1.45091 - 0.28853I$	$-8.65792 + 3.32546I$	0
$u = 1.144550 + 0.762513I$ $a = 0.469004 + 0.255869I$ $b = 0.314083 + 0.282253I$	$-5.17182 - 3.41804I$	0
$u = 1.144550 - 0.762513I$ $a = 0.469004 - 0.255869I$ $b = 0.314083 - 0.282253I$	$-5.17182 + 3.41804I$	0
$u = -0.055853 + 1.399210I$ $a = 0.259596 - 0.566021I$ $b = -0.71608 + 1.95395I$	$1.172940 - 0.320324I$	0
$u = -0.055853 - 1.399210I$ $a = 0.259596 + 0.566021I$ $b = -0.71608 - 1.95395I$	$1.172940 + 0.320324I$	0
$u = -1.220890 + 0.703647I$ $a = -0.246045 + 1.136080I$ $b = 0.830013 + 0.398148I$	$1.96603 + 9.63339I$	0
$u = -1.220890 - 0.703647I$ $a = -0.246045 - 1.136080I$ $b = 0.830013 - 0.398148I$	$1.96603 - 9.63339I$	0
$u = -1.30456 + 0.56803I$ $a = 0.21222 - 1.61192I$ $b = -1.66346 - 1.32611I$	$-3.32087 + 6.55607I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.30456 - 0.56803I$ $a = 0.21222 + 1.61192I$ $b = -1.66346 + 1.32611I$	$-3.32087 - 6.55607I$	0
$u = -1.36104 + 0.44117I$ $a = -0.02107 + 1.52062I$ $b = 1.00390 + 1.20424I$	$-5.86329 + 9.15412I$	0
$u = -1.36104 - 0.44117I$ $a = -0.02107 - 1.52062I$ $b = 1.00390 - 1.20424I$	$-5.86329 - 9.15412I$	0
$u = -1.37113 + 0.45871I$ $a = 0.26995 - 1.55470I$ $b = -0.87251 - 1.82313I$	$-4.46911 + 6.73768I$	0
$u = -1.37113 - 0.45871I$ $a = 0.26995 + 1.55470I$ $b = -0.87251 + 1.82313I$	$-4.46911 - 6.73768I$	0
$u = 1.24060 + 0.75166I$ $a = -0.46366 - 1.44274I$ $b = 1.57729 - 0.83469I$	$0.78106 - 8.94267I$	0
$u = 1.24060 - 0.75166I$ $a = -0.46366 + 1.44274I$ $b = 1.57729 + 0.83469I$	$0.78106 + 8.94267I$	0
$u = 1.31281 + 0.69335I$ $a = 0.37601 + 1.53399I$ $b = -1.54556 + 1.15634I$	$-0.8032 - 16.8481I$	0
$u = 1.31281 - 0.69335I$ $a = 0.37601 - 1.53399I$ $b = -1.54556 - 1.15634I$	$-0.8032 + 16.8481I$	0
$u = -1.48756 + 0.08203I$ $a = -0.513504 + 1.151500I$ $b = -0.85673 + 1.70918I$	$-5.02328 - 5.11535I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.48756 - 0.08203I$ $a = -0.513504 - 1.151500I$ $b = -0.85673 - 1.70918I$	$-5.02328 + 5.11535I$	0
$u = 1.39694 + 0.53346I$ $a = 0.333447 + 0.773642I$ $b = -0.167691 + 0.933629I$	$-5.06385 - 2.26977I$	0
$u = 1.39694 - 0.53346I$ $a = 0.333447 - 0.773642I$ $b = -0.167691 - 0.933629I$	$-5.06385 + 2.26977I$	0
$u = 1.45782 + 0.41166I$ $a = -0.675600 - 1.175820I$ $b = -0.09665 - 2.25637I$	$-4.45663 - 5.90917I$	0
$u = 1.45782 - 0.41166I$ $a = -0.675600 + 1.175820I$ $b = -0.09665 + 2.25637I$	$-4.45663 + 5.90917I$	0
$u = 0.1384700 + 0.0113495I$ $a = -4.51798 + 1.81968I$ $b = 0.353220 - 0.574268I$	$-1.34082 + 0.63330I$	$-8.08009 - 1.67508I$
$u = 0.1384700 - 0.0113495I$ $a = -4.51798 - 1.81968I$ $b = 0.353220 + 0.574268I$	$-1.34082 - 0.63330I$	$-8.08009 + 1.67508I$

II.

$\boldsymbol{I^u_2 = \langle -4.58\times 10^8 u^{16} + 9.61\times 10^8 u^{15} + \cdots + 1.93\times 10^9 b - 9.93\times 10^8,\ 7.03\times 10^8 u^{16} - 1.38\times 10^9 u^{15} + \cdots + 1.93\times 10^9 a + 6.50\times 10^8,\ u^{17} - u^{16} + \cdots - 4u^2 - 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.364651u^{16} + 0.714840u^{15} + \cdots - 2.80781u - 0.337487 \\ 0.237621u^{16} - 0.498590u^{15} + \cdots + 0.0910993u + 0.515212 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.321496u^{16} + 0.509120u^{15} + \cdots - 2.35206u - 0.172464 \\ 0.241488u^{16} - 0.460958u^{15} + \cdots + 0.134254u + 0.352647 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.612409u^{16} + 0.417151u^{15} + \cdots + 1.33960u + 3.13400 \\ 0.260806u^{16} - 0.277899u^{15} + \cdots - 1.93236u - 0.505464 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.351603u^{16} + 0.139252u^{15} + \cdots - 0.592762u + 2.62853 \\ 0.260806u^{16} - 0.277899u^{15} + \cdots - 1.93236u - 0.505464 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1.09161u^{16} - 1.21565u^{15} + \cdots - 3.84808u - 0.692045 \\ -0.277769u^{16} + 0.241174u^{15} + \cdots + 3.19317u - 0.511629 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.823475u^{16} - 0.992964u^{15} + \cdots - 3.28510u - 1.09914 \\ -0.437331u^{16} + 0.284935u^{15} + \cdots + 3.64726u - 0.593676 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.0533608u^{16} + 0.286437u^{15} + \cdots - 2.91505u + 0.234630 \\ 0.509623u^{16} - 0.683642u^{15} + \cdots - 0.428729u + 0.759741 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1.03719u^{16} + 1.32400u^{15} + \cdots + 5.63586u + 0.710941 \\ 0.259310u^{16} - 0.177981u^{15} + \cdots - 3.97640u + 0.735840 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{1861124579}{1926974837}u^{16} - \frac{1654674004}{1926974837}u^{15} + \cdots - \frac{8930565079}{1926974837}u - \frac{3929061975}{1926974837}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{17} - u^{16} + \cdots + 8u - 1$
c_2	$u^{17} + 9u^{16} + \cdots - 8u - 1$
c_3	$u^{17} - 2u^{16} + \cdots - u - 1$
c_4	$u^{17} - 2u^{16} + \cdots - 4u - 1$
c_5	$u^{17} - 9u^{16} + \cdots - 8u + 1$
c_6	$u^{17} + 2u^{16} + \cdots + 2u - 1$
c_7	$u^{17} - u^{16} + \cdots - 4u^2 - 1$
c_8	$u^{17} + 2u^{16} + \cdots - u + 1$
c_9, c_{10}	$u^{17} - 2u^{16} + \cdots + 2u + 1$
c_{11}	$u^{17} + 2u^{16} + \cdots - 4u + 1$
c_{12}	$u^{17} + u^{16} + \cdots + 4u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{17} - 9y^{16} + \cdots + 10y - 1$
c_2, c_5	$y^{17} - 11y^{16} + \cdots + 16y - 1$
c_3, c_8	$y^{17} + 6y^{16} + \cdots - 5y - 1$
c_4, c_{11}	$y^{17} + 8y^{16} + \cdots - 8y - 1$
c_6, c_9, c_{10}	$y^{17} + 14y^{16} + \cdots + 8y - 1$
c_7, c_{12}	$y^{17} - 5y^{16} + \cdots - 8y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.03643$ $a = 1.75097$ $b = -0.373750$	-3.19557	-34.5840
$u = 0.638800 + 0.863369I$ $a = -0.525436 + 0.100281I$ $b = 0.370005 - 0.238052I$	$-1.00430 - 2.73603I$	$-10.70816 + 0.98270I$
$u = 0.638800 - 0.863369I$ $a = -0.525436 - 0.100281I$ $b = 0.370005 + 0.238052I$	$-1.00430 + 2.73603I$	$-10.70816 - 0.98270I$
$u = 0.990121 + 0.590500I$ $a = 1.114650 + 0.707359I$ $b = 0.093119 + 0.360372I$	$-10.87950 - 2.38310I$	$-7.01679 + 4.56060I$
$u = 0.990121 - 0.590500I$ $a = 1.114650 - 0.707359I$ $b = 0.093119 - 0.360372I$	$-10.87950 + 2.38310I$	$-7.01679 - 4.56060I$
$u = -0.107060 + 1.320330I$ $a = 0.021270 - 0.515650I$ $b = -0.45084 + 1.79379I$	$1.26487 - 0.95833I$	$-1.73090 + 6.81853I$
$u = -0.107060 - 1.320330I$ $a = 0.021270 + 0.515650I$ $b = -0.45084 - 1.79379I$	$1.26487 + 0.95833I$	$-1.73090 - 6.81853I$
$u = -1.107840 + 0.838997I$ $a = -0.715934 + 1.184300I$ $b = 1.69244 + 0.40158I$	$-9.25694 + 3.38423I$	$-13.9467 - 4.2175I$
$u = -1.107840 - 0.838997I$ $a = -0.715934 - 1.184300I$ $b = 1.69244 - 0.40158I$	$-9.25694 - 3.38423I$	$-13.9467 + 4.2175I$
$u = 1.25308 + 0.66384I$ $a = -0.549700 - 0.401706I$ $b = -0.326738 - 0.665471I$	$-5.31878 - 3.16732I$	$-16.8676 - 2.7187I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.25308 - 0.66384I$ $a = -0.549700 + 0.401706I$ $b = -0.326738 + 0.665471I$	$-5.31878 + 3.16732I$	$-16.8676 + 2.7187I$
$u = 0.089248 + 0.443151I$ $a = -2.74635 - 0.43495I$ $b = 1.225620 + 0.348844I$	$4.44461 - 0.57232I$	$-1.120956 + 0.305763I$
$u = 0.089248 - 0.443151I$ $a = -2.74635 + 0.43495I$ $b = 1.225620 - 0.348844I$	$4.44461 + 0.57232I$	$-1.120956 - 0.305763I$
$u = -1.47561 + 0.48244I$ $a = 0.16859 - 1.47094I$ $b = -1.25909 - 2.03506I$	$-3.87646 + 7.54083I$	$-4.99133 - 11.97652I$
$u = -1.47561 - 0.48244I$ $a = 0.16859 + 1.47094I$ $b = -1.25909 + 2.03506I$	$-3.87646 - 7.54083I$	$-4.99133 + 11.97652I$
$u = -0.298964 + 0.313290I$ $a = 2.35742 - 1.81709I$ $b = -1.157640 - 0.738822I$	$3.19519 + 6.40579I$	$-3.32551 - 4.81825I$
$u = -0.298964 - 0.313290I$ $a = 2.35742 + 1.81709I$ $b = -1.157640 + 0.738822I$	$3.19519 - 6.40579I$	$-3.32551 + 4.81825I$

III. $I_3^u = \langle 10a^3 - 22a^2 + 93b - 35a - 73,\ 2a^4 - 4a^3 + 7a^2 - 16a + 38,\ u + 1\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} a \\ -0.107527a^3 + 0.236559a^2 + 0.376344a + 0.784946 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -0.107527a^3 + 0.236559a^2 + 0.376344a + 0.784946 \\ -0.215054a^3 + 0.473118a^2 - 0.247312a + 1.56989 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.0215054a^3 + 0.247312a^2 + 0.0752688a - 1.04301 \\ 0.0645161a^3 + 0.258065a^2 - 0.225806a + 0.129032 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.0430108a^3 + 0.505376a^2 - 0.150538a - 0.913978 \\ 0.0645161a^3 + 0.258065a^2 - 0.225806a + 0.129032 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.0430108a^3 - 0.494624a^2 + 0.849462a - 2.91398 \\ -2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.0430108a^3 + 0.494624a^2 + 0.150538a + 2.91398 \\ -0.107527a^3 + 0.236559a^2 + 0.376344a + 2.78495 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} a \\ -0.107527a^3 + 0.236559a^2 + 0.376344a + 0.784946 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.0215054a^3 - 0.247312a^2 - 0.0752688a + 1.04301 \\ -0.0645161a^3 - 0.258065a^2 + 0.225806a - 0.129032 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^4 - 10y^3 + 37y^2 - 52y + 36$
c_2, c_5, c_7 c_{12}	$(y-1)^4$
c_3, c_4, c_8 c_{11}	$4(4y^4 + 20y^3 + 37y^2 + 26y + 9)$
c_6, c_9, c_{10}	$(y+2)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -0.74726 + 1.91261I$ $b = -1.066450 + 0.451407I$	-8.22467	-12.0000
$u = -1.00000$ $a = -0.74726 - 1.91261I$ $b = -1.066450 - 0.451407I$	-8.22467	-12.0000
$u = -1.00000$ $a = 1.74726 + 1.20550I$ $b = 2.06645 + 0.45141I$	-8.22467	-12.0000
$u = -1.00000$ $a = 1.74726 - 1.20550I$ $b = 2.06645 - 0.45141I$	-8.22467	-12.0000

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

(i) Arc colorings

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

(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_4, c_7	$u - 1$
c_5, c_8, c_{11} c_{12}	$u + 1$
c_6, c_9, c_{10}	u

(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, c_{11}, c_{12}	$y - 1$
c_6, c_9, c_{10}	y

(vi) Complex Volumes and Cusp Shapes

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

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^4-2u^3+\cdots+4u+6)(u^{17}-u^{16}+\cdots+8u-1)$ $\cdot(u^{77}+3u^{76}+\cdots+140u+346)$
c_2	$((u-1)^5)(u^{17}+9u^{16}+\cdots-8u-1)(u^{77}+u^{76}+\cdots-31u+3)$
c_3	$4(u-1)(2u^4+5u^2+2u+3)(u^{17}-2u^{16}+\cdots-u-1)$ $\cdot(2u^{77}+2u^{76}+\cdots+45046u+10309)$
c_4	$4(u-1)(2u^4+5u^2-2u+3)(u^{17}-2u^{16}+\cdots-4u-1)$ $\cdot(2u^{77}+2u^{76}+\cdots+471u-43)$
c_5	$((u+1)^5)(u^{17}-9u^{16}+\cdots-8u+1)(u^{77}+u^{76}+\cdots-31u+3)$
c_6	$u(u^2+2)^2(u^{17}+2u^{16}+\cdots+2u-1)(u^{77}+5u^{76}+\cdots-2468u-484)$
c_7	$(u-1)(u+1)^4(u^{17}-u^{16}+\cdots-4u^2-1)$ $\cdot(u^{77}+u^{76}+\cdots-8509u-567)$
c_8	$4(u+1)(2u^4+5u^2-2u+3)(u^{17}+2u^{16}+\cdots-u+1)$ $\cdot(2u^{77}+2u^{76}+\cdots+45046u+10309)$
c_9, c_{10}	$u(u^2+2)^2(u^{17}-2u^{16}+\cdots+2u+1)(u^{77}+5u^{76}+\cdots-2468u-484)$
c_{11}	$4(u+1)(2u^4+5u^2+2u+3)(u^{17}+2u^{16}+\cdots-4u+1)$ $\cdot(2u^{77}+2u^{76}+\cdots+471u-43)$
c_{12}	$((u-1)^4)(u+1)(u^{17}+u^{16}+\cdots+4u^2+1)$ $\cdot(u^{77}+u^{76}+\cdots-8509u-567)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^4-10y^3+\cdots-52y+36)(y^{17}-9y^{16}+\cdots+10y-1)$ $\cdot(y^{77}-37y^{76}+\cdots-4707452y-119716)$
c_2,c_5	$((y-1)^5)(y^{17}-11y^{16}+\cdots+16y-1)(y^{77}-21y^{76}+\cdots+409y-9)$
c_3,c_8	$16(y-1)(4y^4+20y^3+\cdots+26y+9)(y^{17}+6y^{16}+\cdots-5y-1)$ $\cdot(4y^{77}+168y^{76}+\cdots-2292246358y-106275481)$
c_4,c_{11}	$16(y-1)(4y^4+20y^3+\cdots+26y+9)(y^{17}+8y^{16}+\cdots-8y-1)$ $\cdot(4y^{77}+256y^{76}+\cdots+124403y-1849)$
c_6,c_9,c_{10}	$y(y+2)^4(y^{17}+14y^{16}+\cdots+8y-1)$ $\cdot(y^{77}+37y^{76}+\cdots-6355520y-234256)$
c_7,c_{12}	$((y-1)^5)(y^{17}-5y^{16}+\cdots-8y-1)$ $\cdot(y^{77}-39y^{76}+\cdots+38686993y-321489)$