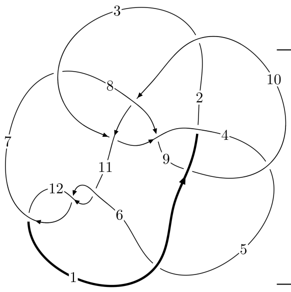
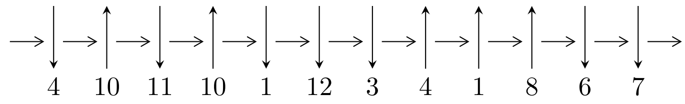
$12n_{0845}$ ($K12n_{0845}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & 7.47941 \times 10^{24} u^{27} + 1.23843 \times 10^{26} u^{26} + \cdots + 1.61992 \times 10^{22} b + 5.31574 \times 10^{27}, \\
& 1.03823 \times 10^{25} u^{27} + 1.71923 \times 10^{26} u^{26} + \cdots + 3.23983 \times 10^{22} a + 7.38572 \times 10^{27}, \\
& u^{28} + 18u^{27} + \cdots + 1280u + 1024 \rangle \\
I_2^u = \langle & -7125076710u^{18} + 91561872113u^{17} + \cdots + 543606477b - 93548383993, \\
& -93548383993u^{18} + 1209003915199u^{17} + \cdots + 543606477a - 1268729042138, \\
& u^{19} - 13u^{18} + \cdots + 29u - 1 \rangle \\
I_3^u = \langle & 468422399a^9u^3 + 40467670a^8u^3 + \cdots - 48741327a + 38855139, \\
& -a^9u^3 - 9a^8u^3 + \cdots + 679a - 378,\ u^4 - 3u^3 + u^2 + 2u + 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 87 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. $I^u_1 = \langle 7.48\times10^{24}u^{27}+1.24\times10^{26}u^{26}+\cdots+1.62\times10^{22}b+5.32\times10^{27},\ 1.04\times10^{25}u^{27}+1.72\times10^{26}u^{26}+\cdots+3.24\times10^{22}a+7.39\times10^{27},\ u^{28}+18u^{27}+\cdots+1280u+1024\rangle$

(i) Arc colorings

$$
\begin{aligned}
a_1 &= \begin{pmatrix}1\\0\end{pmatrix}\\
a_4 &= \begin{pmatrix}0\\u\end{pmatrix}\\
a_2 &= \begin{pmatrix}1\\u^2\end{pmatrix}\\
a_{10} &= \begin{pmatrix}-320.458u^{27}-5306.53u^{26}+\cdots-126445.u-227966.\\-461.716u^{27}-7645.01u^{26}+\cdots-182220.u-328149.\end{pmatrix}\\
a_3 &= \begin{pmatrix}-37.8334u^{27}-632.042u^{26}+\cdots-14648.4u-29529.5\\-48.9592u^{27}-819.012u^{26}+\cdots-18896.2u-38741.4\end{pmatrix}\\
a_5 &= \begin{pmatrix}111.460u^{27}+1856.99u^{26}+\cdots+43415.8u+84604.4\\149.293u^{27}+2489.03u^{26}+\cdots+58065.3u+114135.\end{pmatrix}\\
a_6 &= \begin{pmatrix}-37.8334u^{27}-632.042u^{26}+\cdots-14649.4u-29530.5\\149.293u^{27}+2489.03u^{26}+\cdots+58065.3u+114135.\end{pmatrix}\\
a_9 &= \begin{pmatrix}141.258u^{27}+2338.48u^{26}+\cdots+55775.1u+100183.\\-461.716u^{27}-7645.01u^{26}+\cdots-182220.u-328149.\end{pmatrix}\\
a_8 &= \begin{pmatrix}141.258u^{27}+2338.48u^{26}+\cdots+55775.1u+100183.\\-166.322u^{27}-2755.77u^{26}+\cdots-65538.3u-119085.\end{pmatrix}\\
a_{11} &= \begin{pmatrix}-81.7198u^{27}-1353.54u^{26}+\cdots-32166.5u-58365.7\\-746.494u^{27}-12362.3u^{26}+\cdots-294547.u-531430.\end{pmatrix}\\
a_7 &= \begin{pmatrix}205.704u^{27}+3402.49u^{26}+\cdots+81390.4u+144506.\\-145.362u^{27}-2412.32u^{26}+\cdots-56976.3u-106020.\end{pmatrix}\\
a_{12} &= \begin{pmatrix}-103.259u^{27}-1702.27u^{26}+\cdots-41159.1u-69833.4\\-208.655u^{27}-3462.18u^{26}+\cdots-82098.9u-151590.\end{pmatrix}
\end{aligned}
$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{1332232867773798313448914 7}{80995816399688551135 36}u^{27}+\frac{110674001941628848158963191}{4049790819984427556768}u^{26}+\cdots+\frac{814740070492834415073992 05}{126555963124513361149}u+\frac{1536231667081234376562838 14}{126555963124513361149}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 18u^{27} + \cdots - 1280u + 1024$
c_2, c_8	$u^{28} + u^{27} + \cdots + 2u + 10$
c_3, c_7	$u^{28} - 3u^{26} + \cdots - 4u + 1$
c_4, c_9	$u^{28} + u^{27} + \cdots + 2u + 1$
c_5	$u^{28} + 27u^{27} + \cdots + 186016u + 13840$
c_6, c_{11}, c_{12}	$u^{28} - 8u^{27} + \cdots + 32u + 16$
c_{10}	$u^{28} + 21u^{27} + \cdots + 432u + 32$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} - 28y^{27} + \cdots + 2162688y + 1048576$
c_2, c_8	$y^{28} + 17y^{27} + \cdots + 1336y + 100$
c_3, c_7	$y^{28} - 6y^{27} + \cdots - 22y + 1$
c_4, c_9	$y^{28} + 45y^{27} + \cdots + 16y + 1$
c_5	$y^{28} + 3y^{27} + \cdots - 987913856y + 191545600$
c_6, c_{11}, c_{12}	$y^{28} - 24y^{27} + \cdots - 640y + 256$
c_{10}	$y^{28} + 5y^{27} + \cdots + 13568y + 1024$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.425697 + 0.914932I$ $a = -0.312755 - 0.479893I$ $b = -0.305930 + 0.490439I$	$-3.34248 - 5.03502I$	$0. + 7.22973I$
$u = 0.425697 - 0.914932I$ $a = -0.312755 + 0.479893I$ $b = -0.305930 - 0.490439I$	$-3.34248 + 5.03502I$	$0. - 7.22973I$
$u = -0.105022 + 1.112840I$ $a = 0.381320 - 0.351416I$ $b = -0.351024 - 0.461256I$	$-0.514267 + 0.130456I$	0
$u = -0.105022 - 1.112840I$ $a = 0.381320 + 0.351416I$ $b = -0.351024 + 0.461256I$	$-0.514267 - 0.130456I$	0
$u = 1.130170 + 0.322911I$ $a = -0.317402 - 0.254746I$ $b = 0.276457 + 0.390398I$	$-6.73975 - 1.18993I$	0
$u = 1.130170 - 0.322911I$ $a = -0.317402 + 0.254746I$ $b = 0.276457 - 0.390398I$	$-6.73975 + 1.18993I$	0
$u = -1.324700 + 0.306113I$ $a = -0.621209 + 1.202590I$ $b = -0.45479 + 1.78323I$	$-5.26230 + 3.26030I$	0
$u = -1.324700 - 0.306113I$ $a = -0.621209 - 1.202590I$ $b = -0.45479 - 1.78323I$	$-5.26230 - 3.26030I$	0
$u = -1.41642 + 0.00861I$ $a = 0.253081 - 1.240320I$ $b = 0.34779 - 1.75900I$	$-3.54950 - 3.27899I$	0
$u = -1.41642 - 0.00861I$ $a = 0.253081 + 1.240320I$ $b = 0.34779 + 1.75900I$	$-3.54950 + 3.27899I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.040270 + 0.540835I$ $a = 0.764936 + 0.846392I$ $b = 0.426954 - 0.447789I$	$0.86405 - 1.47972I$	$0.04127 + 5.19835I$
$u = 0.040270 - 0.540835I$ $a = 0.764936 - 0.846392I$ $b = 0.426954 + 0.447789I$	$0.86405 + 1.47972I$	$0.04127 - 5.19835I$
$u = 0.31182 + 1.46661I$ $a = -0.308577 + 0.173644I$ $b = 0.350888 + 0.398418I$	$2.48566 - 3.77616I$	0
$u = 0.31182 - 1.46661I$ $a = -0.308577 - 0.173644I$ $b = 0.350888 - 0.398418I$	$2.48566 + 3.77616I$	0
$u = -1.52883 + 0.03670I$ $a = -0.339231 - 1.169130I$ $b = -0.56153 - 1.77495I$	$-9.73727 + 7.90821I$	0
$u = -1.52883 - 0.03670I$ $a = -0.339231 + 1.169130I$ $b = -0.56153 + 1.77495I$	$-9.73727 - 7.90821I$	0
$u = 0.332678 + 0.259381I$ $a = 1.059500 + 0.353725I$ $b = -0.260723 - 0.392490I$	$-1.017830 - 0.678910I$	$-6.84852 + 2.35129I$
$u = 0.332678 - 0.259381I$ $a = 1.059500 - 0.353725I$ $b = -0.260723 + 0.392490I$	$-1.017830 + 0.678910I$	$-6.84852 - 2.35129I$
$u = -1.73874 + 0.31279I$ $a = 0.195104 - 1.130570I$ $b = -0.01440 - 2.02680I$	$-15.5874 + 4.5388I$	0
$u = -1.73874 - 0.31279I$ $a = 0.195104 + 1.130570I$ $b = -0.01440 + 2.02680I$	$-15.5874 - 4.5388I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.62542 + 1.66377I$ $a = 0.263163 - 0.106601I$ $b = -0.341946 - 0.371174I$	$-2.13746 - 7.74211I$	0
$u = 0.62542 - 1.66377I$ $a = 0.263163 + 0.106601I$ $b = -0.341946 + 0.371174I$	$-2.13746 + 7.74211I$	0
$u = -1.83553 + 0.47211I$ $a = -0.097425 + 0.937524I$ $b = 0.26379 + 1.76685I$	$-7.04260 + 6.51785I$	0
$u = -1.83553 - 0.47211I$ $a = -0.097425 - 0.937524I$ $b = 0.26379 - 1.76685I$	$-7.04260 - 6.51785I$	0
$u = -1.93764 + 0.44814I$ $a = -0.023604 - 0.925470I$ $b = -0.46048 - 1.78265I$	$-5.47616 + 11.59450I$	0
$u = -1.93764 - 0.44814I$ $a = -0.023604 + 0.925470I$ $b = -0.46048 + 1.78265I$	$-5.47616 - 11.59450I$	0
$u = -1.97916 + 0.39645I$ $a = 0.103098 + 0.960765I$ $b = 0.58495 + 1.86064I$	$-11.2075 + 15.9109I$	0
$u = -1.97916 - 0.39645I$ $a = 0.103098 - 0.960765I$ $b = 0.58495 - 1.86064I$	$-11.2075 - 15.9109I$	0

II. $\boldsymbol{I_2^u = \langle -7.13\times 10^{9}u^{18} + 9.16\times 10^{10}u^{17} + \cdots + 5.44\times 10^{8}b - 9.35\times 10^{10},\ -9.35\times 10^{10}u^{18} + 1.21\times 10^{12}u^{17} + \cdots + 5.44\times 10^{8}a - 1.27\times 10^{12},\ u^{19} - 13u^{18} + \cdots + 29u - 1\rangle}$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}172.088u^{18} - 2224.04u^{17} + \cdots - 36002.5u + 2333.91\\13.1070u^{18} - 168.434u^{17} + \cdots - 2656.65u + 172.088\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-255.016u^{18} + 3296.25u^{17} + \cdots + 53367.8u - 3449.13\\-18.9607u^{18} + 244.839u^{17} + \cdots + 3945.33u - 255.016\end{pmatrix}$$
$$a_5 = \begin{pmatrix}275.389u^{18} - 3559.68u^{17} + \cdots - 57628.5u + 3725.52\\20.3725u^{18} - 263.431u^{17} + \cdots - 4259.75u + 275.389\end{pmatrix}$$
$$a_6 = \begin{pmatrix}255.016u^{18} - 3296.25u^{17} + \cdots - 53368.8u + 3450.13\\20.3725u^{18} - 263.431u^{17} + \cdots - 4259.75u + 275.389\end{pmatrix}$$
$$a_9 = \begin{pmatrix}158.981u^{18} - 2055.61u^{17} + \cdots - 33345.8u + 2161.82\\13.1070u^{18} - 168.434u^{17} + \cdots - 2656.65u + 172.088\end{pmatrix}$$
$$a_8 = \begin{pmatrix}158.981u^{18} - 2055.61u^{17} + \cdots - 33345.8u + 2161.82\\12.7663u^{18} - 166.395u^{17} + \cdots - 2821.01u + 183.238\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-386.578u^{18} + 4997.30u^{17} + \cdots + 80922.8u - 5216.60\\-34.7026u^{18} + 449.189u^{17} + \cdots + 7326.27u - 472.582\end{pmatrix}$$
$$a_7 = \begin{pmatrix}239.348u^{18} - 3094.91u^{17} + \cdots - 50207.9u + 3243.13\\21.1566u^{18} - 274.000u^{17} + \cdots - 4496.28u + 290.649\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-155.007u^{18} + 2004.69u^{17} + \cdots + 32544.1u - 2096.72\\-14.7054u^{18} + 190.365u^{17} + \cdots + 3100.48u - 199.857\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= -\frac{119077780094}{543606477}u^{18} + \frac{513494948917}{181202159}u^{17} + \cdots + \frac{25027294000157}{543606477}u - \frac{1610829968363}{543606477}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{19} - 13u^{18} + \cdots + 29u - 1$
c_2, c_8	$u^{19} - u^{18} + \cdots + 15u + 4$
c_3, c_7	$u^{19} + 3u^{17} + \cdots - 5u - 1$
c_4, c_9	$u^{19} - u^{18} + \cdots - u - 1$
c_5	$u^{19} + 2u^{17} + \cdots - u + 2$
c_6	$u^{19} - u^{18} + \cdots + u - 2$
c_{10}	$u^{19} - 6u^{18} + \cdots - u^2 - 1$
c_{11}, c_{12}	$u^{19} + u^{18} + \cdots + u + 2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{19} - 21y^{18} + \cdots + 369y - 1$
c_2, c_8	$y^{19} + 9y^{18} + \cdots + 313y - 16$
c_3, c_7	$y^{19} + 6y^{18} + \cdots + 13y - 1$
c_4, c_9	$y^{19} + 13y^{18} + \cdots + 15y - 1$
c_5	$y^{19} + 4y^{18} + \cdots - 7y - 4$
c_6, c_{11}, c_{12}	$y^{19} - 19y^{18} + \cdots - 7y - 4$
c_{10}	$y^{19} + 4y^{18} + \cdots - 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.132656 + 1.126360I$ $a = 0.153669 + 0.574383I$ $b = -0.667344 + 0.096891I$	$3.32009 - 4.48223I$	$4.24188 + 6.09054I$
$u = -0.132656 - 1.126360I$ $a = 0.153669 - 0.574383I$ $b = -0.667344 - 0.096891I$	$3.32009 + 4.48223I$	$4.24188 - 6.09054I$
$u = 0.785063$ $a = -1.31667$ $b = -1.03366$	-4.77237	-11.3350
$u = -0.725595 + 0.990920I$ $a = -0.391337 - 0.324746I$ $b = 0.605750 - 0.152150I$	$0.045522 - 1.162280I$	$-2.70106 + 1.05620I$
$u = -0.725595 - 0.990920I$ $a = -0.391337 + 0.324746I$ $b = 0.605750 + 0.152150I$	$0.045522 + 1.162280I$	$-2.70106 - 1.05620I$
$u = -0.679401 + 0.189945I$ $a = 0.707865 + 0.676866I$ $b = -0.609492 - 0.325408I$	$-0.50830 + 4.64971I$	$-2.08446 - 8.11285I$
$u = -0.679401 - 0.189945I$ $a = 0.707865 - 0.676866I$ $b = -0.609492 + 0.325408I$	$-0.50830 - 4.64971I$	$-2.08446 + 8.11285I$
$u = 0.277340 + 1.346140I$ $a = 0.080380 - 0.492677I$ $b = 0.685506 - 0.028435I$	$-1.35162 - 8.11424I$	$0. + 8.05738I$
$u = 0.277340 - 1.346140I$ $a = 0.080380 + 0.492677I$ $b = 0.685506 + 0.028435I$	$-1.35162 + 8.11424I$	$0. - 8.05738I$
$u = 1.35264 + 0.41899I$ $a = -0.581509 - 0.936432I$ $b = -0.39421 - 1.51030I$	$-5.14116 - 3.04738I$	$-5.23248 - 5.83675I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.35264 - 0.41899I$ $a = -0.581509 + 0.936432I$ $b = -0.39421 + 1.51030I$	$-5.14116 + 3.04738I$	$-5.23248 + 5.83675I$
$u = 1.89589 + 0.25753I$ $a = 0.001396 - 0.811646I$ $b = 0.21167 - 1.53843I$	$-5.14031 - 1.99928I$	0
$u = 1.89589 - 0.25753I$ $a = 0.001396 + 0.811646I$ $b = 0.21167 + 1.53843I$	$-5.14031 + 1.99928I$	0
$u = 0.0740689 + 0.0001641I$ $a = 10.82830 - 4.38594I$ $b = 0.802759 - 0.323084I$	$2.12947 - 2.13351I$	$7.28519 + 5.60767I$
$u = 0.0740689 - 0.0001641I$ $a = 10.82830 + 4.38594I$ $b = 0.802759 + 0.323084I$	$2.12947 + 2.13351I$	$7.28519 - 5.60767I$
$u = 1.93088 + 0.10553I$ $a = -0.111630 + 0.947120I$ $b = -0.31549 + 1.81699I$	$-10.73160 - 4.56238I$	0
$u = 1.93088 - 0.10553I$ $a = -0.111630 - 0.947120I$ $b = -0.31549 - 1.81699I$	$-10.73160 + 4.56238I$	0
$u = 2.11431 + 0.40872I$ $a = -0.028790 + 0.590712I$ $b = -0.302309 + 1.237180I$	$-8.19982 - 0.45166I$	0
$u = 2.11431 - 0.40872I$ $a = -0.028790 - 0.590712I$ $b = -0.302309 - 1.237180I$	$-8.19982 + 0.45166I$	0

III. $\boldsymbol{I^u_3 = \langle 4.68 \times 10^8 a^9 u^3 + 4.05 \times 10^7 a^8 u^3 + \cdots - 4.87 \times 10^7 a + 3.89 \times 10^7,\ -a^9 u^3 - 9a^8 u^3 + \cdots + 679a - 378,\ u^4 - 3u^3 + u^2 + 2u + 1\rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} a \\ -22.1644a^9u^3 - 1.91482a^8u^3 + \cdots + 2.30630a - 1.83852 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -1.51178a^9u^3 - 8.84115a^8u^3 + \cdots + 3.25676a + 1.69003 \\ a^2u^2 + 2u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} a^2u \\ -4.63223a^9u^3 + 13.2533a^8u^3 + \cdots - 5.43917a - 2.40270 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 4.63223a^9u^3 - 13.2533a^8u^3 + \cdots + 5.43917a + 2.40270 \\ -4.63223a^9u^3 + 13.2533a^8u^3 + \cdots - 5.43917a - 2.40270 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 22.1644a^9u^3 + 1.91482a^8u^3 + \cdots - 1.30630a + 1.83852 \\ -22.1644a^9u^3 - 1.91482a^8u^3 + \cdots + 2.30630a - 1.83852 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 22.1644a^9u^3 + 1.91482a^8u^3 + \cdots - 1.30630a + 1.83852 \\ 38.6794a^9u^3 + 22.0734a^8u^3 + \cdots - 9.55612a + 5.40766 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 15.1613a^9u^3 - 7.57062a^8u^3 + \cdots + 2.80685a + 0.756003 \\ 33.7491a^9u^3 - 12.2037a^8u^3 + \cdots + 2.40978a + 3.94988 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 20.9588a^9u^3 - 3.95908a^8u^3 + \cdots - 1.13897a + 3.09172 \\ -31.4812a^9u^3 + 26.0516a^8u^3 + \cdots - 5.58213a - 2.98326 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 41.8680a^9u^3 + 34.2555a^8u^3 + \cdots - 7.45530a + 1.02267 \\ -17.8033a^9u^3 - 23.2306a^8u^3 + \cdots + 6.33497a + 0.367516 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{2269696784}{21133951}a^9u^3 + \frac{1081914868}{21133951}a^8u^3 + \cdots - \frac{12085268}{21133951}a - \frac{175881906}{21133951}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^4+3u^3+u^2-2u+1)^{10}$
c_2, c_8	$u^{40}-u^{39}+\cdots-2252u+10709$
c_3, c_7	$u^{40}-3u^{39}+\cdots-94u+19$
c_4, c_9	$u^{40}-u^{39}+\cdots-15778u+2401$
c_5	$(u^5-3u^4+4u^3-u^2-u+1)^8$
c_6, c_{11}, c_{12}	$(u^5+u^4-2u^3-u^2+u-1)^8$
c_{10}	$(u^4-u^3+u^2+1)^{10}$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^4 - 7y^3 + 15y^2 - 2y + 1)^{10}$
c_2, c_8	$y^{40} + 19y^{39} + \cdots + 1867654162y + 114682681$
c_3, c_7	$y^{40} + 7y^{39} + \cdots + 1044y + 361$
c_4, c_9	$y^{40} + 39y^{39} + \cdots - 51765560y + 5764801$
c_5	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^8$
c_6, c_{11}, c_{12}	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^8$
c_{10}	$(y^4 + y^3 + 3y^2 + 2y + 1)^{10}$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.399232 + 0.325640I$ $a = 0.824100 - 1.018670I$ $b = -1.309580 + 0.234829I$	$1.52684 - 4.69454I$	$-2.68838 + 6.99545I$
$u = -0.399232 + 0.325640I$ $a = 0.477104 + 0.081474I$ $b = 1.024160 - 0.489876I$	$1.52684 - 1.63338I$	$-2.68838 - 1.86585I$
$u = -0.399232 + 0.325640I$ $a = -1.37182 - 1.14774I$ $b = -0.894007 + 0.844829I$	$-4.01662 + 1.23687I$	$-6.91758 - 0.93379I$
$u = -0.399232 + 0.325640I$ $a = 0.76466 + 1.68764I$ $b = -0.774417 + 0.765734I$	$-0.54514 - 3.16396I$	$-3.65440 + 2.56480I$
$u = -0.399232 + 0.325640I$ $a = -0.71374 + 1.79710I$ $b = 1.61076 - 0.36829I$	$-4.01662 - 7.56480I$	$-6.91758 + 6.06338I$
$u = -0.399232 + 0.325640I$ $a = -2.10425 + 0.20165I$ $b = 0.854840 + 0.424757I$	$-0.54514 - 3.16396I$	$-3.65440 + 2.56480I$
$u = -0.399232 + 0.325640I$ $a = 2.14145 + 0.51967I$ $b = 0.217006 - 0.122837I$	$1.52684 - 1.63338I$	$-2.68838 - 1.86585I$
$u = -0.399232 + 0.325640I$ $a = -2.38116 + 0.17390I$ $b = -0.921427 - 0.011495I$	$-4.01662 + 1.23687I$	$-6.91758 - 0.93379I$
$u = -0.399232 + 0.325640I$ $a = -2.25785 - 1.25346I$ $b = -0.002714 - 0.675046I$	$1.52684 - 4.69454I$	$-2.68838 + 6.99545I$
$u = -0.399232 + 0.325640I$ $a = 2.87459 + 1.42222I$ $b = 0.300259 + 0.949883I$	$-4.01662 - 7.56480I$	$-6.91758 + 6.06338I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.399232-0.325640I$ $a=\ \ 0.824100+1.018670I$ $b=-1.309580-0.234829I$	$1.52684+4.69454I$	$-2.68838-6.99545I$
$u=-0.399232-0.325640I$ $a=\ \ 0.477104-0.081474I$ $b=\ \ 1.024160+0.489876I$	$1.52684+1.63338I$	$-2.68838+1.86585I$
$u=-0.399232-0.325640I$ $a=-1.37182+1.14774I$ $b=-0.894007-0.844829I$	$-4.01662-1.23687I$	$-6.91758+0.93379I$
$u=-0.399232-0.325640I$ $a=\ \ 0.76466-1.68764I$ $b=-0.774417-0.765734I$	$-0.54514+3.16396I$	$-3.65440-2.56480I$
$u=-0.399232-0.325640I$ $a=-0.71374-1.79710I$ $b=\ \ 1.61076+0.36829I$	$-4.01662+7.56480I$	$-6.91758-6.06338I$
$u=-0.399232-0.325640I$ $a=-2.10425-0.20165I$ $b=\ \ 0.854840-0.424757I$	$-0.54514+3.16396I$	$-3.65440-2.56480I$
$u=-0.399232-0.325640I$ $a=\ \ 2.14145-0.51967I$ $b=\ \ 0.217006+0.122837I$	$1.52684+1.63338I$	$-2.68838+1.86585I$
$u=-0.399232-0.325640I$ $a=-2.38116-0.17390I$ $b=-0.921427+0.011495I$	$-4.01662-1.23687I$	$-6.91758+0.93379I$
$u=-0.399232-0.325640I$ $a=-2.25785+1.25346I$ $b=-0.002714+0.675046I$	$1.52684+4.69454I$	$-2.68838-6.99545I$
$u=-0.399232-0.325640I$ $a=\ \ 2.87459-1.42222I$ $b=\ \ 0.300259-0.949883I$	$-4.01662+7.56480I$	$-6.91758-6.06338I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.89923 + 0.40053I$ $a = 0.137171 + 0.934880I$ $b = 0.168897 + 1.333680I$	$-5.47491 + 0.11547I$	$-6.34185 + 0.47809I$
$u = 1.89923 + 0.40053I$ $a = -0.220342 + 1.050850I$ $b = -0.05103 + 1.66432I$	$-11.01840 - 5.81594I$	$-10.57105 + 8.40733I$
$u = 1.89923 + 0.40053I$ $a = 0.122676 - 0.897182I$ $b = 0.04153 - 1.50176I$	$-5.47491 - 2.94568I$	$-6.34185 + 9.33939I$
$u = 1.89923 + 0.40053I$ $a = -0.196723 - 1.090910I$ $b = -0.36491 - 1.44551I$	$-11.01840 + 2.98573I$	$-10.57105 + 1.41016I$
$u = 1.89923 + 0.40053I$ $a = -0.151210 - 0.844421I$ $b = 0.83938 - 1.90756I$	$-11.01840 - 5.81594I$	$-10.57105 + 8.40733I$
$u = 1.89923 + 0.40053I$ $a = 0.138717 + 0.761464I$ $b = -0.59234 + 1.65482I$	$-5.47491 - 2.94568I$	$-6.34185 + 9.33939I$
$u = 1.89923 + 0.40053I$ $a = 0.337630 + 0.689898I$ $b = -0.06332 + 2.15068I$	$-11.01840 + 2.98573I$	$-10.57105 + 1.41016I$
$u = 1.89923 + 0.40053I$ $a = -0.146267 - 0.682718I$ $b = 0.298645 - 0.966564I$	$-7.54689 - 1.41510I$	$-7.30788 + 4.90874I$
$u = 1.89923 + 0.40053I$ $a = -0.226929 - 0.654363I$ $b = 0.11393 - 1.83050I$	$-5.47491 + 0.11547I$	$-6.34185 + 0.47809I$
$u = 1.89923 + 0.40053I$ $a = -0.047792 + 0.519003I$ $b = 0.004345 + 1.355230I$	$-7.54689 - 1.41510I$	$-7.30788 + 4.90874I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.89923 - 0.40053I$ $a = 0.137171 - 0.934880I$ $b = 0.168897 - 1.333680I$	$-5.47491 - 0.11547I$	$-6.34185 - 0.47809I$
$u = 1.89923 - 0.40053I$ $a = -0.220342 - 1.050850I$ $b = -0.05103 - 1.66432I$	$-11.01840 + 5.81594I$	$-10.57105 - 8.40733I$
$u = 1.89923 - 0.40053I$ $a = 0.122676 + 0.897182I$ $b = 0.04153 + 1.50176I$	$-5.47491 + 2.94568I$	$-6.34185 - 9.33939I$
$u = 1.89923 - 0.40053I$ $a = -0.196723 + 1.090910I$ $b = -0.36491 + 1.44551I$	$-11.01840 - 2.98573I$	$-10.57105 - 1.41016I$
$u = 1.89923 - 0.40053I$ $a = -0.151210 + 0.844421I$ $b = 0.83938 + 1.90756I$	$-11.01840 + 5.81594I$	$-10.57105 - 8.40733I$
$u = 1.89923 - 0.40053I$ $a = 0.138717 - 0.761464I$ $b = -0.59234 - 1.65482I$	$-5.47491 + 2.94568I$	$-6.34185 - 9.33939I$
$u = 1.89923 - 0.40053I$ $a = 0.337630 - 0.689898I$ $b = -0.06332 - 2.15068I$	$-11.01840 - 2.98573I$	$-10.57105 - 1.41016I$
$u = 1.89923 - 0.40053I$ $a = -0.146267 + 0.682718I$ $b = 0.298645 + 0.966564I$	$-7.54689 + 1.41510I$	$-7.30788 - 4.90874I$
$u = 1.89923 - 0.40053I$ $a = -0.226929 + 0.654363I$ $b = 0.11393 + 1.83050I$	$-5.47491 - 0.11547I$	$-6.34185 - 0.47809I$
$u = 1.89923 - 0.40053I$ $a = -0.047792 - 0.519003I$ $b = 0.004345 - 1.355230I$	$-7.54689 + 1.41510I$	$-7.30788 - 4.90874I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^4+3u^3+u^2-2u+1)^{10})(u^{19}-13u^{18}+\cdots+29u-1)$ $\cdot(u^{28}-18u^{27}+\cdots-1280u+1024)$
c_2, c_8	$(u^{19}-u^{18}+\cdots+15u+4)(u^{28}+u^{27}+\cdots+2u+10)$ $\cdot(u^{40}-u^{39}+\cdots-2252u+10709)$
c_3, c_7	$(u^{19}+3u^{17}+\cdots-5u-1)(u^{28}-3u^{26}+\cdots-4u+1)$ $\cdot(u^{40}-3u^{39}+\cdots-94u+19)$
c_4, c_9	$(u^{19}-u^{18}+\cdots-u-1)(u^{28}+u^{27}+\cdots+2u+1)$ $\cdot(u^{40}-u^{39}+\cdots-15778u+2401)$
c_5	$((u^5-3u^4+4u^3-u^2-u+1)^8)(u^{19}+2u^{17}+\cdots-u+2)$ $\cdot(u^{28}+27u^{27}+\cdots+186016u+13840)$
c_6	$((u^5+u^4-2u^3-u^2+u-1)^8)(u^{19}-u^{18}+\cdots+u-2)$ $\cdot(u^{28}-8u^{27}+\cdots+32u+16)$
c_{10}	$((u^4-u^3+u^2+1)^{10})(u^{19}-6u^{18}+\cdots-u^2-1)$ $\cdot(u^{28}+21u^{27}+\cdots+432u+32)$
c_{11}, c_{12}	$((u^5+u^4-2u^3-u^2+u-1)^8)(u^{19}+u^{18}+\cdots+u+2)$ $\cdot(u^{28}-8u^{27}+\cdots+32u+16)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^4-7y^3+15y^2-2y+1)^{10})(y^{19}-21y^{18}+\cdots+369y-1)$ $\cdot(y^{28}-28y^{27}+\cdots+2162688y+1048576)$
c_2, c_8	$(y^{19}+9y^{18}+\cdots+313y-16)(y^{28}+17y^{27}+\cdots+1336y+100)$ $\cdot(y^{40}+19y^{39}+\cdots+1867654162y+114682681)$
c_3, c_7	$(y^{19}+6y^{18}+\cdots+13y-1)(y^{28}-6y^{27}+\cdots-22y+1)$ $\cdot(y^{40}+7y^{39}+\cdots+1044y+361)$
c_4, c_9	$(y^{19}+13y^{18}+\cdots+15y-1)(y^{28}+45y^{27}+\cdots+16y+1)$ $\cdot(y^{40}+39y^{39}+\cdots-51765560y+5764801)$
c_5	$((y^5-y^4+8y^3-3y^2+3y-1)^8)(y^{19}+4y^{18}+\cdots-7y-4)$ $\cdot(y^{28}+3y^{27}+\cdots-987913856y+191545600)$
c_6, c_{11}, c_{12}	$((y^5-5y^4+8y^3-3y^2-y-1)^8)(y^{19}-19y^{18}+\cdots-7y-4)$ $\cdot(y^{28}-24y^{27}+\cdots-640y+256)$
c_{10}	$((y^4+y^3+3y^2+2y+1)^{10})(y^{19}+4y^{18}+\cdots-2y-1)$ $\cdot(y^{28}+5y^{27}+\cdots+13568y+1024)$