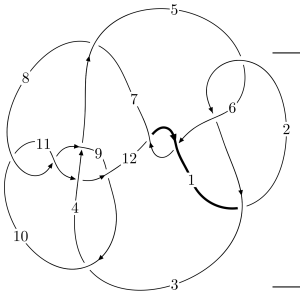
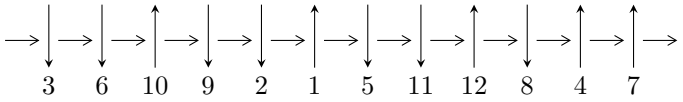
$12a_{0446}$ $(K12a_{0446})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 9.81367 \times 10^{890} u^{115} - 1.43266 \times 10^{891} u^{114} + \cdots + 4.70124 \times 10^{891} b - 1.58539 \times 10^{893}, \\ & 1.01422 \times 10^{893} u^{115} - 1.53993 \times 10^{893} u^{114} + \cdots + 3.71398 \times 10^{893} a - 1.36518 \times 10^{895}, \\ & u^{116} - 2u^{115} + \cdots + 115u + 79 \rangle \\ I_2^u = \langle & b + 2,\ a - 1,\ u + 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 117 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. $\boldsymbol{I_1^u = \langle 9.81 \times 10^{890} u^{115} - 1.43 \times 10^{891} u^{114} + \cdots + 4.70 \times 10^{891} b - 1.59 \times 10^{893},\ 1.01 \times 10^{893} u^{115} - 1.54 \times 10^{893} u^{114} + \cdots + 3.71 \times 10^{893} a - 1.37 \times 10^{895},\ u^{116} - 2u^{115} + \cdots + 115u + 79 \rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.273081u^{115} + 0.414631u^{114} + \cdots + 122.190u + 36.7579 \\ -0.208746u^{115} + 0.304741u^{114} + \cdots + 103.296u + 33.7227 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -0.552619u^{115} + 0.826356u^{114} + \cdots + 262.185u + 80.8716 \\ -0.135003u^{115} + 0.194749u^{114} + \cdots + 64.2667u + 22.0820 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.813970u^{115} - 1.20617u^{114} + \cdots - 380.866u - 124.597 \\ 0.218953u^{115} - 0.325444u^{114} + \cdots - 108.758u - 30.6043 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1.03292u^{115} - 1.53161u^{114} + \cdots - 489.624u - 155.202 \\ 0.218953u^{115} - 0.325444u^{114} + \cdots - 108.758u - 30.6043 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.629874u^{115} - 0.885124u^{114} + \cdots - 213.206u - 79.4249 \\ -0.745206u^{115} + 1.10942u^{114} + \cdots + 382.947u + 115.904 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -2.77476u^{115} + 4.16315u^{114} + \cdots + 1499.26u + 434.932 \\ 0.559144u^{115} - 0.858928u^{114} + \cdots - 344.823u - 93.2392 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.64280u^{115} - 2.44093u^{114} + \cdots - 803.107u - 247.103 \\ -0.0368661u^{115} + 0.0591602u^{114} + \cdots + 28.2441u + 8.14818 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.686595u^{115} - 0.996166u^{114} + \cdots - 302.971u - 97.1620 \\ -0.447903u^{115} + 0.662858u^{114} + \cdots + 223.489u + 67.8492 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2.40163u^{115} - 3.68546u^{114} + \cdots - 1480.26u - 410.550 \\ -0.0391826u^{115} + 0.0512360u^{114} + \cdots + 4.80775u + 4.71164 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.88684u^{115} - 2.93040u^{114} + \cdots - 1183.32u - 304.174$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{116} + 62u^{115} + \cdots - u + 1$
c_2, c_5	$u^{116} + 2u^{115} + \cdots + 5u + 1$
c_3	$u^{116} - 51u^{114} + \cdots - 208u - 56$
c_4	$u^{116} + 2u^{115} + \cdots - 115u + 79$
c_6, c_{12}	$u^{116} + 3u^{115} + \cdots + 565u^2 - 32$
c_7	$u^{116} - 12u^{115} + \cdots - 1181u + 29$
c_8, c_{10}	$u^{116} - 2u^{115} + \cdots - u - 1$
c_9	$u^{116} + 19u^{115} + \cdots - 2u + 2$
c_{11}	$u^{116} - 2u^{115} + \cdots + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{116} - 14y^{115} + \cdots + 69y + 1$
c_2, c_5	$y^{116} - 62y^{115} + \cdots + y + 1$
c_3	$y^{116} - 102y^{115} + \cdots + 113760y + 3136$
c_4	$y^{116} - 122y^{115} + \cdots - 263971y + 6241$
c_6, c_{12}	$y^{116} + 87y^{115} + \cdots - 36160y + 1024$
c_7	$y^{116} + 22y^{115} + \cdots + 2701257y + 841$
c_8, c_{10}	$y^{116} - 74y^{115} + \cdots - 107y + 1$
c_9	$y^{116} - 9y^{115} + \cdots - 88y + 4$
c_{11}	$y^{116} + 18y^{115} + \cdots + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.951325 + 0.313588I$ $a = -1.225350 - 0.298169I$ $b = 1.137870 + 0.252464I$	$-1.01973 - 1.06715I$	0
$u = 0.951325 - 0.313588I$ $a = -1.225350 + 0.298169I$ $b = 1.137870 - 0.252464I$	$-1.01973 + 1.06715I$	0
$u = -0.596448 + 0.824284I$ $a = 0.743724 - 0.759157I$ $b = 0.218175 - 0.249595I$	$3.93410 + 2.59183I$	0
$u = -0.596448 - 0.824284I$ $a = 0.743724 + 0.759157I$ $b = 0.218175 + 0.249595I$	$3.93410 - 2.59183I$	0
$u = -0.952880 + 0.239211I$ $a = 1.349090 - 0.420028I$ $b = -1.265490 + 0.213892I$	$-1.45435 + 5.15444I$	0
$u = -0.952880 - 0.239211I$ $a = 1.349090 + 0.420028I$ $b = -1.265490 - 0.213892I$	$-1.45435 - 5.15444I$	0
$u = 0.084892 + 1.020460I$ $a = 0.219707 - 0.594375I$ $b = -0.130857 + 0.587100I$	$2.67777 - 2.30723I$	0
$u = 0.084892 - 1.020460I$ $a = 0.219707 + 0.594375I$ $b = -0.130857 - 0.587100I$	$2.67777 + 2.30723I$	0
$u = 0.957748 + 0.114531I$ $a = -1.48224 - 0.63128I$ $b = 1.48514 + 0.08966I$	$-7.51968 - 10.06630I$	0
$u = 0.957748 - 0.114531I$ $a = -1.48224 + 0.63128I$ $b = 1.48514 - 0.08966I$	$-7.51968 + 10.06630I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.380130 + 0.969615I$ $a = 0.570001 - 0.668737I$ $b = -0.642625 + 0.438196I$	$0.56321 - 3.80754I$	0
$u = 0.380130 - 0.969615I$ $a = 0.570001 + 0.668737I$ $b = -0.642625 - 0.438196I$	$0.56321 + 3.80754I$	0
$u = 0.064129 + 1.043420I$ $a = -0.150013 - 0.358017I$ $b = -0.005139 + 0.568167I$	$2.59093 - 2.28064I$	0
$u = 0.064129 - 1.043420I$ $a = -0.150013 + 0.358017I$ $b = -0.005139 - 0.568167I$	$2.59093 + 2.28064I$	0
$u = 0.881712 + 0.572493I$ $a = -0.979523 + 0.283828I$ $b = 0.978600 + 0.277804I$	$-1.90994 - 0.93281I$	0
$u = 0.881712 - 0.572493I$ $a = -0.979523 - 0.283828I$ $b = 0.978600 - 0.277804I$	$-1.90994 + 0.93281I$	0
$u = 0.711364 + 0.627206I$ $a = -0.672678 - 0.684854I$ $b = 0.152953 + 0.002754I$	$-1.06556 - 3.75617I$	0
$u = 0.711364 - 0.627206I$ $a = -0.672678 + 0.684854I$ $b = 0.152953 - 0.002754I$	$-1.06556 + 3.75617I$	0
$u = -0.936756 + 0.131580I$ $a = 1.50411 - 0.58305I$ $b = -1.42992 + 0.07583I$	$-4.43225 + 5.33303I$	0
$u = -0.936756 - 0.131580I$ $a = 1.50411 + 0.58305I$ $b = -1.42992 - 0.07583I$	$-4.43225 - 5.33303I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.964220 + 0.438444I$ $a = -0.793334 - 0.454170I$ $b = 0.701814 + 0.332184I$	$-2.45699 - 1.34404I$	0
$u = 0.964220 - 0.438444I$ $a = -0.793334 + 0.454170I$ $b = 0.701814 - 0.332184I$	$-2.45699 + 1.34404I$	0
$u = 0.646590 + 0.851847I$ $a = -0.752328 - 0.742271I$ $b = -0.294950 - 0.151308I$	$3.53389 - 7.04008I$	0
$u = 0.646590 - 0.851847I$ $a = -0.752328 + 0.742271I$ $b = -0.294950 + 0.151308I$	$3.53389 + 7.04008I$	0
$u = 0.909971 + 0.102992I$ $a = -1.57919 - 0.61335I$ $b = 1.44161 - 0.00386I$	$-8.34099 - 1.39112I$	0
$u = 0.909971 - 0.102992I$ $a = -1.57919 + 0.61335I$ $b = 1.44161 + 0.00386I$	$-8.34099 + 1.39112I$	0
$u = -0.969402 + 0.494770I$ $a = 0.794653 - 0.526373I$ $b = -0.578732 + 0.423782I$	$-5.94980 + 5.43731I$	0
$u = -0.969402 - 0.494770I$ $a = 0.794653 + 0.526373I$ $b = -0.578732 - 0.423782I$	$-5.94980 - 5.43731I$	0
$u = -0.468281 + 0.990716I$ $a = 0.232120 - 0.155624I$ $b = -0.044643 + 0.762341I$	$-4.00401 - 0.60060I$	0
$u = -0.468281 - 0.990716I$ $a = 0.232120 + 0.155624I$ $b = -0.044643 - 0.762341I$	$-4.00401 + 0.60060I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.010200+0.443183I$ $a=\ \ 0.862881-0.480901I$ $b=-0.762564+0.458627I$	$-5.62707-3.04654I$	0
$u=-1.010200-0.443183I$ $a=\ \ 0.862881+0.480901I$ $b=-0.762564-0.458627I$	$-5.62707+3.04654I$	0
$u=\ \ 0.346639+1.056800I$ $a=-0.227147-0.202967I$ $b=-0.027442+0.697767I$	$-0.06123-3.10256I$	0
$u=\ \ 0.346639-1.056800I$ $a=-0.227147+0.202967I$ $b=-0.027442-0.697767I$	$-0.06123+3.10256I$	0
$u=-0.495663+0.730134I$ $a=\ \ 0.708823-0.811665I$ $b=-0.008967-0.405619I$	$2.39643+1.55166I$	0
$u=-0.495663-0.730134I$ $a=\ \ 0.708823+0.811665I$ $b=-0.008967+0.405619I$	$2.39643-1.55166I$	0
$u=\ \ 0.739644+0.865988I$ $a=-0.760142-0.718167I$ $b=-0.349873+0.057411I$	$0.44560-7.70285I$	0
$u=\ \ 0.739644-0.865988I$ $a=-0.760142+0.718167I$ $b=-0.349873-0.057411I$	$0.44560+7.70285I$	0
$u=-0.768688+0.842410I$ $a=\ \ 0.757586-0.709448I$ $b=\ \ 0.298085+0.128897I$	$-3.60377+3.86288I$	0
$u=-0.768688-0.842410I$ $a=\ \ 0.757586+0.709448I$ $b=\ \ 0.298085-0.128897I$	$-3.60377-3.86288I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.408925 + 0.752776I$ $a = -0.739911 - 0.853696I$ $b = 0.019426 - 0.574858I$	$-0.14534 + 2.85221I$	0
$u = 0.408925 - 0.752776I$ $a = -0.739911 + 0.853696I$ $b = 0.019426 + 0.574858I$	$-0.14534 - 2.85221I$	0
$u = -0.481940 + 1.043550I$ $a = -0.626250 - 0.573662I$ $b = 0.720874 + 0.197474I$	$-1.90960 + 8.56015I$	0
$u = -0.481940 - 1.043550I$ $a = -0.626250 + 0.573662I$ $b = 0.720874 - 0.197474I$	$-1.90960 - 8.56015I$	0
$u = -0.752662 + 0.886476I$ $a = 0.765501 - 0.716826I$ $b = 0.400952 + 0.084836I$	$-2.56650 + 12.52600I$	0
$u = -0.752662 - 0.886476I$ $a = 0.765501 + 0.716826I$ $b = 0.400952 - 0.084836I$	$-2.56650 - 12.52600I$	0
$u = -0.409179 + 0.700700I$ $a = -0.795198 - 0.929070I$ $b = 1.029620 + 0.902177I$	$-3.81251 + 0.96684I$	0
$u = -0.409179 - 0.700700I$ $a = -0.795198 + 0.929070I$ $b = 1.029620 - 0.902177I$	$-3.81251 - 0.96684I$	0
$u = 1.026410 + 0.602938I$ $a = 1.054580 - 0.358615I$ $b = -2.22047 + 0.23273I$	$-11.34380 - 0.03428I$	0
$u = 1.026410 - 0.602938I$ $a = 1.054580 + 0.358615I$ $b = -2.22047 - 0.23273I$	$-11.34380 + 0.03428I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.385613+1.128150I$ $a=\ \ 0.256170-0.201485I$ $b=\ \ 0.072518+0.735096I$	$-2.98922+7.86043I$	0
$u=-0.385613-1.128150I$ $a=\ \ 0.256170+0.201485I$ $b=\ \ 0.072518-0.735096I$	$-2.98922-7.86043I$	0
$u=-1.032620+0.660866I$ $a=-1.018910-0.361684I$ $b=\ \ 2.16318+0.12160I$	$-7.73953+4.64372I$	0
$u=-1.032620-0.660866I$ $a=-1.018910+0.361684I$ $b=\ \ 2.16318-0.12160I$	$-7.73953-4.64372I$	0
$u=-0.710479+0.194269I$ $a=\ \ 1.94994-0.14929I$ $b=-1.075650-0.138829I$	$-4.93169+1.71660I$	0
$u=-0.710479-0.194269I$ $a=\ \ 1.94994+0.14929I$ $b=-1.075650+0.138829I$	$-4.93169-1.71660I$	0
$u=\ \ 1.089870+0.664564I$ $a=\ \ 1.011240-0.329764I$ $b=-2.26352+0.04611I$	$-11.4429-9.1627I$	0
$u=\ \ 1.089870-0.664564I$ $a=\ \ 1.011240+0.329764I$ $b=-2.26352-0.04611I$	$-11.4429+9.1627I$	0
$u=\ \ 0.631956+0.275564I$ $a=-0.182383+0.087700I$ $b=\ \ 0.495068+0.435356I$	$-1.47021-0.27681I$	0
$u=\ \ 0.631956-0.275564I$ $a=-0.182383-0.087700I$ $b=\ \ 0.495068-0.435356I$	$-1.47021+0.27681I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.268648 + 0.573440I$ $a = -0.680616 - 1.049200I$ $b = 0.412706 - 0.654226I$	$-0.57611 - 4.58827I$	$0. + 4.86927I$
$u = 0.268648 - 0.573440I$ $a = -0.680616 + 1.049200I$ $b = 0.412706 + 0.654226I$	$-0.57611 + 4.58827I$	$0. - 4.86927I$
$u = -0.96196 + 1.05654I$ $a = -0.812469 - 0.370562I$ $b = 1.49889 - 0.49595I$	$-2.79197 + 2.22125I$	0
$u = -0.96196 - 1.05654I$ $a = -0.812469 + 0.370562I$ $b = 1.49889 + 0.49595I$	$-2.79197 - 2.22125I$	0
$u = 0.492095 + 0.287973I$ $a = 1.89019 - 0.51259I$ $b = -1.86100 - 1.33877I$	$-5.51335 - 10.68540I$	$-6.39835 + 11.37042I$
$u = 0.492095 - 0.287973I$ $a = 1.89019 + 0.51259I$ $b = -1.86100 + 1.33877I$	$-5.51335 + 10.68540I$	$-6.39835 - 11.37042I$
$u = -0.459078 + 0.262441I$ $a = -1.98453 - 0.53766I$ $b = 1.85971 - 1.26356I$	$-2.39606 + 5.72681I$	$-3.01180 - 8.91982I$
$u = -0.459078 - 0.262441I$ $a = -1.98453 + 0.53766I$ $b = 1.85971 + 1.26356I$	$-2.39606 - 5.72681I$	$-3.01180 + 8.91982I$
$u = 0.485878 + 0.205373I$ $a = 2.04179 - 0.38653I$ $b = -1.96830 - 1.24632I$	$-6.62753 - 1.68977I$	$-8.65839 + 6.90519I$
$u = 0.485878 - 0.205373I$ $a = 2.04179 + 0.38653I$ $b = -1.96830 + 1.24632I$	$-6.62753 + 1.68977I$	$-8.65839 - 6.90519I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.05302 + 1.05561I$ $a = 0.826801 - 0.335108I$ $b = -1.66441 - 0.63046I$	$-0.71405 - 6.75491I$	0
$u = 1.05302 - 1.05561I$ $a = 0.826801 + 0.335108I$ $b = -1.66441 + 0.63046I$	$-0.71405 + 6.75491I$	0
$u = -1.14489 + 0.95885I$ $a = -0.872772 - 0.308091I$ $b = 1.97935 - 0.58428I$	$-5.09347 + 8.75536I$	0
$u = -1.14489 - 0.95885I$ $a = -0.872772 + 0.308091I$ $b = 1.97935 + 0.58428I$	$-5.09347 - 8.75536I$	0
$u = 0.486308 + 0.002623I$ $a = -3.23996 - 0.71175I$ $b = 0.892231 - 0.617655I$	$-9.00507 - 2.50241I$	$-14.0048 + 2.9683I$
$u = 0.486308 - 0.002623I$ $a = -3.23996 + 0.71175I$ $b = 0.892231 + 0.617655I$	$-9.00507 + 2.50241I$	$-14.0048 - 2.9683I$
$u = -0.420605 + 0.027804I$ $a = 3.75214 - 0.46463I$ $b = -0.760725 - 0.615309I$	$-5.24191 - 1.51598I$	$-9.76716 + 0.89866I$
$u = -0.420605 - 0.027804I$ $a = 3.75214 + 0.46463I$ $b = -0.760725 + 0.615309I$	$-5.24191 + 1.51598I$	$-9.76716 - 0.89866I$
$u = 0.403042 + 0.024873I$ $a = -3.92955 + 0.97229I$ $b = 0.759637 + 0.720012I$	$-8.38542 - 6.14161I$	$-12.65761 + 4.07144I$
$u = 0.403042 - 0.024873I$ $a = -3.92955 - 0.97229I$ $b = 0.759637 - 0.720012I$	$-8.38542 + 6.14161I$	$-12.65761 - 4.07144I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.264303+0.300206I$ $a=-2.05489-1.16409I$ $b=\ \ 1.53531-0.99321I$	$1.42033+5.07802I$	$1.84512-10.30585I$
$u=-0.264303-0.300206I$ $a=-2.05489+1.16409I$ $b=\ \ 1.53531+0.99321I$	$1.42033-5.07802I$	$1.84512+10.30585I$
$u=\ \ 1.16084+1.10269I$ $a=\ \ 0.821739-0.291754I$ $b=-1.79414-0.88363I$	$0.48514-8.35993I$	0
$u=\ \ 1.16084-1.10269I$ $a=\ \ 0.821739+0.291754I$ $b=-1.79414+0.88363I$	$0.48514+8.35993I$	0
$u=-0.217289+0.330927I$ $a=\ \ 0.27959-1.41738I$ $b=-0.732166-0.464709I$	$1.60905+0.62537I$	$5.18961-0.15952I$
$u=-0.217289-0.330927I$ $a=\ \ 0.27959+1.41738I$ $b=-0.732166+0.464709I$	$1.60905-0.62537I$	$5.18961+0.15952I$
$u=-1.61104+0.26665I$ $a=\ \ 0.395281-0.027240I$ $b=-1.44627+0.82641I$	$-5.39929+2.07907I$	0
$u=-1.61104-0.26665I$ $a=\ \ 0.395281+0.027240I$ $b=-1.44627-0.82641I$	$-5.39929-2.07907I$	0
$u=-1.21155+1.10824I$ $a=-0.824065-0.274848I$ $b=\ \ 1.88330-0.97374I$	$-0.11124+13.00390I$	0
$u=-1.21155-1.10824I$ $a=-0.824065+0.274848I$ $b=\ \ 1.88330+0.97374I$	$-0.11124-13.00390I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.30043 + 1.04503I$ $a = 0.848545 - 0.249873I$ $b = -2.15879 - 0.98590I$	$-7.84175 - 9.92352I$	0
$u = 1.30043 - 1.04503I$ $a = 0.848545 + 0.249873I$ $b = -2.15879 + 0.98590I$	$-7.84175 + 9.92352I$	0
$u = -1.29488 + 1.07685I$ $a = -0.838474 - 0.250535I$ $b = 2.09822 - 1.04198I$	$-3.6335 + 13.8522I$	0
$u = -1.29488 - 1.07685I$ $a = -0.838474 + 0.250535I$ $b = 2.09822 + 1.04198I$	$-3.6335 - 13.8522I$	0
$u = 0.131631 + 0.279844I$ $a = 1.92308 - 1.83687I$ $b = -1.33414 - 0.74898I$	$2.24491 - 0.54156I$	$5.37800 + 2.71375I$
$u = 0.131631 - 0.279844I$ $a = 1.92308 + 1.83687I$ $b = -1.33414 + 0.74898I$	$2.24491 + 0.54156I$	$5.37800 - 2.71375I$
$u = -0.179401 + 0.235532I$ $a = 3.27080 + 3.68921I$ $b = -0.283500 - 0.362333I$	$-2.61216 - 1.82601I$	$-7.43468 + 4.49023I$
$u = -0.179401 - 0.235532I$ $a = 3.27080 - 3.68921I$ $b = -0.283500 + 0.362333I$	$-2.61216 + 1.82601I$	$-7.43468 - 4.49023I$
$u = 1.31481 + 1.08468I$ $a = 0.836832 - 0.244204I$ $b = -2.12654 - 1.08915I$	$-6.6857 - 18.7864I$	0
$u = 1.31481 - 1.08468I$ $a = 0.836832 + 0.244204I$ $b = -2.12654 + 1.08915I$	$-6.6857 + 18.7864I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.240038$ $a=-3.75464$ $b=\ \ 2.25736$	-2.86634	13.7270
$u=\ \ 1.82523+0.08587I$ $a=-0.405638-0.049339I$ $b=\ \ 1.78830+0.67390I$	$-1.82580+1.77123I$	0
$u=\ \ 1.82523-0.08587I$ $a=-0.405638+0.049339I$ $b=\ \ 1.78830-0.67390I$	$-1.82580-1.77123I$	0
$u=-1.89748+0.26038I$ $a=\ \ 0.393199-0.047430I$ $b=-1.82576+0.93565I$	$-4.82691-6.28136I$	0
$u=-1.89748-0.26038I$ $a=\ \ 0.393199+0.047430I$ $b=-1.82576-0.93565I$	$-4.82691+6.28136I$	0
$u=\ \ 2.41030+0.14560I$ $a=-0.373393+0.074405I$ $b=\ \ 2.65352-0.44777I$	$0.23305-1.55271I$	0
$u=\ \ 2.41030-0.14560I$ $a=-0.373393-0.074405I$ $b=\ \ 2.65352+0.44777I$	$0.23305+1.55271I$	0
$u=-2.69014+0.13527I$ $a=\ \ 0.357401+0.065285I$ $b=-3.07803-0.43805I$	$0.07962-2.57850I$	0
$u=-2.69014-0.13527I$ $a=\ \ 0.357401-0.065285I$ $b=-3.07803+0.43805I$	$0.07962+2.57850I$	0
$u=-3.02300+0.05391I$ $a=\ \ 0.345666+0.043402I$ $b=-3.64918-0.43475I$	$-2.53474-2.83534I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-3.02300-0.05391I$ $a=\ \ 0.345666-0.043402I$ $b=-3.64918+0.43475I$	$-2.53474+2.83534I$	0
$u=\ \ 3.03155+0.01362I$ $a=-0.350231-0.040154I$ $b=\ \ 3.71230+0.54862I$	$-5.56752-7.50076I$	0
$u=\ \ 3.03155-0.01362I$ $a=-0.350231+0.040154I$ $b=\ \ 3.71230-0.54862I$	$-5.56752+7.50076I$	0
$u=\ \ 3.11959+0.05104I$ $a=-0.341491+0.035514I$ $b=\ \ 3.81267-0.35773I$	$-6.34329-1.02736I$	0
$u=\ \ 3.11959-0.05104I$ $a=-0.341491-0.035514I$ $b=\ \ 3.81267+0.35773I$	$-6.34329+1.02736I$	0
$u=-3.62493$ $a=\ \ 0.284520$ $b=-4.09386$	-3.01604	0

II. $I_2^u = \langle b+2,\ a-1,\ u+1 \rangle$

(i) Arc colorings

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

(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_8 c_{11}	$u-1$
c_3, c_4, c_5 c_7, c_{10}	$u+1$
c_6, c_9, 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_7 c_8, c_{10}, c_{11}	$y-1$
c_6, c_9, c_{12}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.00000$ $a=\ \ 1.00000$ $b=-2.00000$	-3.28987	-12.0000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^{116}+62u^{115}+\cdots-u+1)$
c_2	$(u-1)(u^{116}+2u^{115}+\cdots+5u+1)$
c_3	$(u+1)(u^{116}-51u^{114}+\cdots-208u-56)$
c_4	$(u+1)(u^{116}+2u^{115}+\cdots-115u+79)$
c_5	$(u+1)(u^{116}+2u^{115}+\cdots+5u+1)$
c_6, c_{12}	$u(u^{116}+3u^{115}+\cdots+565u^2-32)$
c_7	$(u+1)(u^{116}-12u^{115}+\cdots-1181u+29)$
c_8	$(u-1)(u^{116}-2u^{115}+\cdots-u-1)$
c_9	$u(u^{116}+19u^{115}+\cdots-2u+2)$
c_{10}	$(u+1)(u^{116}-2u^{115}+\cdots-u-1)$
c_{11}	$(u-1)(u^{116}-2u^{115}+\cdots+u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y^{116}-14y^{115}+\cdots+69y+1)$
c_2, c_5	$(y-1)(y^{116}-62y^{115}+\cdots+y+1)$
c_3	$(y-1)(y^{116}-102y^{115}+\cdots+113760y+3136)$
c_4	$(y-1)(y^{116}-122y^{115}+\cdots-263971y+6241)$
c_6, c_{12}	$y(y^{116}+87y^{115}+\cdots-36160y+1024)$
c_7	$(y-1)(y^{116}+22y^{115}+\cdots+2701257y+841)$
c_8, c_{10}	$(y-1)(y^{116}-74y^{115}+\cdots-107y+1)$
c_9	$y(y^{116}-9y^{115}+\cdots-88y+4)$
c_{11}	$(y-1)(y^{116}+18y^{115}+\cdots+y+1)$