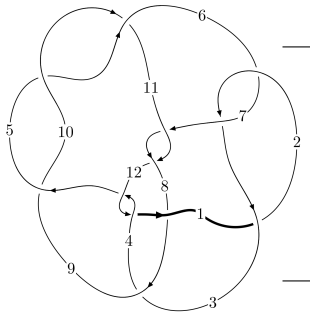
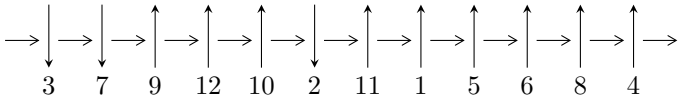
$12a_{0607}$ $(K12a_{0607})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2.26145 \times 10^{231} u^{113} + 5.03095 \times 10^{231} u^{112} + \cdots + 2.30777 \times 10^{232} b - 4.08208 \times 10^{232},$$
$$1.92889 \times 10^{232} u^{113} - 6.36228 \times 10^{232} u^{112} + \cdots + 2.30777 \times 10^{232} a - 1.06029 \times 10^{233},\ u^{114} - 3u^{113} + \cdots -$$
$$I_2^u = \langle -21u^{27} + 10u^{26} + \cdots + 2b - 19,\ -70u^{27} + 54u^{26} + \cdots + 2a - 63,\ u^{28} - 7u^{26} + \cdots - 7u^2 + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 142 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. $\boldsymbol{I_1^u = \langle -2.26 \times 10^{231} u^{113} + 5.03 \times 10^{231} u^{112} + \cdots + 2.31 \times 10^{232} b - 4.08 \times 10^{232},\ 1.93 \times 10^{232} u^{113} - 6.36 \times 10^{232} u^{112} + \cdots + 2.31 \times 10^{232} a - 1.06 \times 10^{233},\ u^{114} - 3u^{113} + \cdots - 9u + 1 \rangle}$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.835823u^{113} + 2.75689u^{112} + \cdots + 12.9197u + 4.59444 \\ 0.0979929u^{113} - 0.218000u^{112} + \cdots - 1.42503u + 1.76884 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.140571u^{113} + 0.865203u^{112} + \cdots + 20.0913u - 9.45803 \\ 0.0539117u^{113} + 0.0112822u^{112} + \cdots + 4.42174u - 3.00291 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -1.04769u^{113} + 3.21627u^{112} + \cdots + 12.2084u - 6.84623 \\ -0.162523u^{113} + 0.434835u^{112} + \cdots - 2.74906u - 2.14289 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.933816u^{113} + 2.97489u^{112} + \cdots + 14.3447u + 2.82560 \\ 0.0979929u^{113} - 0.218000u^{112} + \cdots - 1.42503u + 1.76884 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.603142u^{113} + 1.89788u^{112} + \cdots + 5.83444u + 6.88505 \\ -0.0853653u^{113} + 0.0879853u^{112} + \cdots - 4.45011u + 3.08256 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.240716u^{113} - 0.351628u^{112} + \cdots + 104.338u - 3.46261 \\ -0.129888u^{113} + 0.442143u^{112} + \cdots + 34.0231u - 0.816845 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.127045u^{113} + 0.763359u^{112} + \cdots + 19.0070u - 9.34243 \\ 0.0914259u^{113} - 0.176272u^{112} + \cdots + 1.60745u - 2.70612 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.28402u^{113} + 7.67069u^{112} + \cdots + 6.89091u + 6.29754$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{114} + 41u^{113} + \cdots - 29u + 1$
c_2, c_6	$u^{114} - 3u^{113} + \cdots - 9u + 1$
c_3	$u^{114} - u^{113} + \cdots + 621u - 135$
c_4, c_{12}	$u^{114} + 5u^{113} + \cdots - 4u + 1$
c_5, c_9, c_{10}	$u^{114} + u^{113} + \cdots - 18u - 19$
c_7, c_{11}	$u^{114} + 3u^{113} + \cdots + 9623u - 24763$
c_8	$u^{114} + 2u^{113} + \cdots + 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{114} + 75y^{113} + \cdots + 6061y + 1$
c_2, c_6	$y^{114} - 41y^{113} + \cdots + 29y + 1$
c_3	$y^{114} - 11y^{113} + \cdots - 978561y + 18225$
c_4, c_{12}	$y^{114} + 65y^{113} + \cdots - 44y + 1$
c_5, c_9, c_{10}	$y^{114} - 123y^{113} + \cdots + 38854y + 361$
c_7, c_{11}	$y^{114} - 99y^{113} + \cdots - 42189999285y + 613206169$
c_8	$y^{114} - 8y^{113} + \cdots - 169y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.687146+0.735720I$ $a=-0.711893-0.154086I$ $b=\ \ 1.62059-0.07956I$	$10.22650-1.77188I$	0
$u=-0.687146-0.735720I$ $a=-0.711893+0.154086I$ $b=\ \ 1.62059+0.07956I$	$10.22650+1.77188I$	0
$u=-0.416841+0.898796I$ $a=\ \ 0.593965-0.281830I$ $b=\ \ 0.419388+0.044804I$	$1.18254+4.12227I$	0
$u=-0.416841-0.898796I$ $a=\ \ 0.593965+0.281830I$ $b=\ \ 0.419388-0.044804I$	$1.18254-4.12227I$	0
$u=\ \ 0.656531+0.741360I$ $a=-0.303134+0.456349I$ $b=\ \ 1.52215+0.05789I$	$9.90297-1.32162I$	0
$u=\ \ 0.656531-0.741360I$ $a=-0.303134-0.456349I$ $b=\ \ 1.52215-0.05789I$	$9.90297+1.32162I$	0
$u=\ \ 1.022400+0.102373I$ $a=\ \ 0.09858+1.51788I$ $b=\ \ 0.197689+0.736964I$	$-5.82932+1.67100I$	0
$u=\ \ 1.022400-0.102373I$ $a=\ \ 0.09858-1.51788I$ $b=\ \ 0.197689-0.736964I$	$-5.82932-1.67100I$	0
$u=-0.966026+0.044927I$ $a=-0.86533-1.32827I$ $b=-1.349860-0.318487I$	$-0.96786+5.47578I$	0
$u=-0.966026-0.044927I$ $a=-0.86533+1.32827I$ $b=-1.349860+0.318487I$	$-0.96786-5.47578I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.674987 + 0.789459I$ $a = 0.149508 - 0.108550I$ $b = 1.64038 + 0.36093I$	$10.44150 + 2.65068I$	0
$u = 0.674987 - 0.789459I$ $a = 0.149508 + 0.108550I$ $b = 1.64038 - 0.36093I$	$10.44150 - 2.65068I$	0
$u = -0.694806 + 0.781406I$ $a = -0.085877 + 0.391899I$ $b = 1.76063 - 0.18976I$	$10.74210 + 1.01393I$	0
$u = -0.694806 - 0.781406I$ $a = -0.085877 - 0.391899I$ $b = 1.76063 + 0.18976I$	$10.74210 - 1.01393I$	0
$u = -0.663472 + 0.826356I$ $a = 0.572692 - 0.380758I$ $b = 0.735129 - 0.861124I$	$2.66493 - 7.25563I$	0
$u = -0.663472 - 0.826356I$ $a = 0.572692 + 0.380758I$ $b = 0.735129 + 0.861124I$	$2.66493 + 7.25563I$	0
$u = -1.031320 + 0.247644I$ $a = 0.73338 + 1.41269I$ $b = 0.928652 + 0.388462I$	$-3.62383 + 2.35168I$	0
$u = -1.031320 - 0.247644I$ $a = 0.73338 - 1.41269I$ $b = 0.928652 - 0.388462I$	$-3.62383 - 2.35168I$	0
$u = 0.760682 + 0.745312I$ $a = -1.22079 - 1.02252I$ $b = 1.47330 + 0.09412I$	$4.21030 + 4.72580I$	0
$u = 0.760682 - 0.745312I$ $a = -1.22079 + 1.02252I$ $b = 1.47330 - 0.09412I$	$4.21030 - 4.72580I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.853183 + 0.637547I$ $a = 0.133748 - 0.301643I$ $b = -0.820294 - 0.338861I$	$1.91540 + 0.28860I$	0
$u = 0.853183 - 0.637547I$ $a = 0.133748 + 0.301643I$ $b = -0.820294 + 0.338861I$	$1.91540 - 0.28860I$	0
$u = -1.022870 + 0.303089I$ $a = 0.087397 - 0.691848I$ $b = 0.106734 - 0.416579I$	$-1.67757 + 1.43149I$	0
$u = -1.022870 - 0.303089I$ $a = 0.087397 + 0.691848I$ $b = 0.106734 + 0.416579I$	$-1.67757 - 1.43149I$	0
$u = -0.744192 + 0.769898I$ $a = -0.873971 + 0.992561I$ $b = 1.52165 + 0.02535I$	$7.84290 + 0.07695I$	0
$u = -0.744192 - 0.769898I$ $a = -0.873971 - 0.992561I$ $b = 1.52165 - 0.02535I$	$7.84290 - 0.07695I$	0
$u = 0.701261 + 0.809937I$ $a = -0.76258 - 1.30558I$ $b = 1.391660 - 0.240173I$	$4.02139 - 5.25665I$	0
$u = 0.701261 - 0.809937I$ $a = -0.76258 + 1.30558I$ $b = 1.391660 + 0.240173I$	$4.02139 + 5.25665I$	0
$u = 0.652489 + 0.850184I$ $a = 0.500471 + 0.385406I$ $b = 0.708591 + 0.564396I$	$5.94392 + 1.82084I$	0
$u = 0.652489 - 0.850184I$ $a = 0.500471 - 0.385406I$ $b = 0.708591 - 0.564396I$	$5.94392 - 1.82084I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.073140 + 0.020166I$ $a = -2.24488 - 0.16611I$ $b = -1.52097 + 0.06557I$	$4.97270 + 1.30211I$	0
$u = 1.073140 - 0.020166I$ $a = -2.24488 + 0.16611I$ $b = -1.52097 - 0.06557I$	$4.97270 - 1.30211I$	0
$u = 0.829568 + 0.711577I$ $a = -0.66425 - 1.58449I$ $b = 0.582614 - 1.102900I$	$1.93395 + 0.79079I$	0
$u = 0.829568 - 0.711577I$ $a = -0.66425 + 1.58449I$ $b = 0.582614 + 1.102900I$	$1.93395 - 0.79079I$	0
$u = 0.865431 + 0.672196I$ $a = -0.48048 - 1.68943I$ $b = 0.600183 - 0.350005I$	$1.87096 - 5.40732I$	0
$u = 0.865431 - 0.672196I$ $a = -0.48048 + 1.68943I$ $b = 0.600183 + 0.350005I$	$1.87096 + 5.40732I$	0
$u = -1.098690 + 0.025423I$ $a = -2.28293 - 0.07852I$ $b = -1.394210 - 0.160736I$	$4.53228 + 2.12178I$	0
$u = -1.098690 - 0.025423I$ $a = -2.28293 + 0.07852I$ $b = -1.394210 + 0.160736I$	$4.53228 - 2.12178I$	0
$u = -0.862622 + 0.682659I$ $a = -0.107962 + 1.334120I$ $b = -0.094957 + 0.360332I$	$3.80188 + 2.63299I$	0
$u = -0.862622 - 0.682659I$ $a = -0.107962 - 1.334120I$ $b = -0.094957 - 0.360332I$	$3.80188 - 2.63299I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.972129 + 0.515032I$ $a = -0.299722 - 1.098280I$ $b = 0.635707 - 0.346720I$	$-0.23772 - 4.14498I$	0
$u = 0.972129 - 0.515032I$ $a = -0.299722 + 1.098280I$ $b = 0.635707 + 0.346720I$	$-0.23772 + 4.14498I$	0
$u = 1.078820 + 0.253934I$ $a = -0.295447 + 0.454772I$ $b = -1.194550 + 0.023824I$	$1.73914 - 0.34165I$	0
$u = 1.078820 - 0.253934I$ $a = -0.295447 - 0.454772I$ $b = -1.194550 - 0.023824I$	$1.73914 + 0.34165I$	0
$u = -0.860383 + 0.700798I$ $a = -0.58733 + 1.30064I$ $b = 0.034847 + 0.933766I$	$4.04070 + 2.66294I$	0
$u = -0.860383 - 0.700798I$ $a = -0.58733 - 1.30064I$ $b = 0.034847 - 0.933766I$	$4.04070 - 2.66294I$	0
$u = -0.872136 + 0.695957I$ $a = -0.530562 + 1.086410I$ $b = -0.245542 + 0.864719I$	$4.00377 + 2.70161I$	0
$u = -0.872136 - 0.695957I$ $a = -0.530562 - 1.086410I$ $b = -0.245542 - 0.864719I$	$4.00377 - 2.70161I$	0
$u = 0.902561 + 0.702531I$ $a = -0.835313 - 0.646351I$ $b = -0.763977 - 1.091830I$	$1.70809 - 6.20997I$	0
$u = 0.902561 - 0.702531I$ $a = -0.835313 + 0.646351I$ $b = -0.763977 + 1.091830I$	$1.70809 + 6.20997I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.137270 + 0.138672I$ $a = -0.736925 + 1.104060I$ $b = -0.284580 + 0.620295I$	$-4.02177 - 6.73618I$	0
$u = 1.137270 - 0.138672I$ $a = -0.736925 - 1.104060I$ $b = -0.284580 - 0.620295I$	$-4.02177 + 6.73618I$	0
$u = -0.658818 + 0.538012I$ $a = 0.632654 - 0.504067I$ $b = -0.106596 - 0.602936I$	$-0.81300 + 2.04247I$	0
$u = -0.658818 - 0.538012I$ $a = 0.632654 + 0.504067I$ $b = -0.106596 + 0.602936I$	$-0.81300 - 2.04247I$	0
$u = -1.018230 + 0.572015I$ $a = -0.825410 + 0.893886I$ $b = 0.450106 + 0.523077I$	$-3.04314 + 7.76053I$	0
$u = -1.018230 - 0.572015I$ $a = -0.825410 - 0.893886I$ $b = 0.450106 - 0.523077I$	$-3.04314 - 7.76053I$	0
$u = -0.819327 + 0.048463I$ $a = 0.35946 - 1.74798I$ $b = -0.977420 - 0.553553I$	$-2.04792 - 2.57909I$	0
$u = -0.819327 - 0.048463I$ $a = 0.35946 + 1.74798I$ $b = -0.977420 + 0.553553I$	$-2.04792 + 2.57909I$	0
$u = 0.960415 + 0.709234I$ $a = 0.87680 + 1.44795I$ $b = -1.52758 + 0.16787I$	$3.59710 - 10.27140I$	0
$u = 0.960415 - 0.709234I$ $a = 0.87680 - 1.44795I$ $b = -1.52758 - 0.16787I$	$3.59710 + 10.27140I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.640881 + 1.013880I$ $a = \quad 0.156682 - 0.032729I$ $b = -1.61385 - 0.26973I$	$10.3917 + 11.4294I$	0
$u = \quad 0.640881 - 1.013880I$ $a = \quad 0.156682 + 0.032729I$ $b = -1.61385 + 0.26973I$	$10.3917 - 11.4294I$	0
$u = \quad 1.084260 + 0.520592I$ $a = \quad 0.844079 - 0.332678I$ $b = \quad 0.847667 + 0.398395I$	$-2.03832 - 4.47053I$	0
$u = \quad 1.084260 - 0.520592I$ $a = \quad 0.844079 + 0.332678I$ $b = \quad 0.847667 - 0.398395I$	$-2.03832 + 4.47053I$	0
$u = -0.975926 + 0.722744I$ $a = \quad 0.427427 - 1.309440I$ $b = -1.55466 - 0.07819I$	$7.13663 + 5.58384I$	0
$u = -0.975926 - 0.722744I$ $a = \quad 0.427427 + 1.309440I$ $b = -1.55466 + 0.07819I$	$7.13663 - 5.58384I$	0
$u = -1.001810 + 0.689576I$ $a = -0.00485 - 2.22149I$ $b = -1.57683 - 0.12120I$	$9.27436 + 7.23736I$	0
$u = -1.001810 - 0.689576I$ $a = -0.00485 + 2.22149I$ $b = -1.57683 + 0.12120I$	$9.27436 - 7.23736I$	0
$u = \quad 1.018140 + 0.685989I$ $a = -0.33782 + 2.18119I$ $b = -1.44174 + 0.09950I$	$8.81704 - 4.15106I$	0
$u = \quad 1.018140 - 0.685989I$ $a = -0.33782 - 2.18119I$ $b = -1.44174 - 0.09950I$	$8.81704 + 4.15106I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.477411+0.598550I$ $a=\ \ 0.774763-0.083961I$ $b=-0.236399+0.446068I$	$-1.53130-3.08780I$	0
$u=-0.477411-0.598550I$ $a=\ \ 0.774763+0.083961I$ $b=-0.236399-0.446068I$	$-1.53130+3.08780I$	0
$u=-1.009830+0.714378I$ $a=-0.23478-1.88366I$ $b=-1.70728-0.29283I$	$9.78782+4.65620I$	0
$u=-1.009830-0.714378I$ $a=-0.23478+1.88366I$ $b=-1.70728+0.29283I$	$9.78782-4.65620I$	0
$u=\ \ 1.021150+0.712559I$ $a=-0.21656+1.97267I$ $b=-1.55622+0.46183I$	$9.39662-8.33652I$	0
$u=\ \ 1.021150-0.712559I$ $a=-0.21656-1.97267I$ $b=-1.55622-0.46183I$	$9.39662+8.33652I$	0
$u=\ \ 0.243145+1.222210I$ $a=\ \ 0.135280+0.042768I$ $b=-1.50747+0.03858I$	$7.70400-4.59092I$	0
$u=\ \ 0.243145-1.222210I$ $a=\ \ 0.135280-0.042768I$ $b=-1.50747-0.03858I$	$7.70400+4.59092I$	0
$u=\ \ 0.975488+0.775696I$ $a=\ \ 0.347242+0.642091I$ $b=-1.42569-0.05175I$	$3.20335-0.75897I$	0
$u=\ \ 0.975488-0.775696I$ $a=\ \ 0.347242-0.642091I$ $b=-1.42569+0.05175I$	$3.20335+0.75897I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.180290+0.435638I$ $a=-0.302558-0.304136I$ $b=\ \ 0.0068746-0.1321510I$	$-1.80324+1.34018I$	0
$u=-1.180290-0.435638I$ $a=-0.302558+0.304136I$ $b=\ \ 0.0068746+0.1321510I$	$-1.80324-1.34018I$	0
$u=-0.969511+0.802457I$ $a=\ \ 0.357667-0.790876I$ $b=-0.098925-0.624742I$	$-0.49725+3.12941I$	0
$u=-0.969511-0.802457I$ $a=\ \ 0.357667+0.790876I$ $b=-0.098925+0.624742I$	$-0.49725-3.12941I$	0
$u=-1.030150+0.723704I$ $a=\ \ 0.41772-1.51712I$ $b=-0.640823-0.993658I$	$1.55831+13.06750I$	0
$u=-1.030150-0.723704I$ $a=\ \ 0.41772+1.51712I$ $b=-0.640823+0.993658I$	$1.55831-13.06750I$	0
$u=\ \ 1.037100+0.733051I$ $a=\ \ 0.196691+1.367080I$ $b=-0.612490+0.738604I$	$4.78946-7.72086I$	0
$u=\ \ 1.037100-0.733051I$ $a=\ \ 0.196691-1.367080I$ $b=-0.612490-0.738604I$	$4.78946+7.72086I$	0
$u=-0.662465+1.092250I$ $a=\ \ 0.146104-0.018387I$ $b=-1.57302+0.17868I$	$13.4992-4.5857I$	0
$u=-0.662465-1.092250I$ $a=\ \ 0.146104+0.018387I$ $b=-1.57302-0.17868I$	$13.4992+4.5857I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.565277 + 0.411855I$ $a = 0.648571 + 0.272348I$ $b = -0.528824 - 0.056200I$	$0.979706 + 0.080743I$	$11.44031 + 0.I$
$u = 0.565277 - 0.411855I$ $a = 0.648571 - 0.272348I$ $b = -0.528824 + 0.056200I$	$0.979706 - 0.080743I$	$11.44031 + 0.I$
$u = 0.315578 + 0.601032I$ $a = 0.503617 + 0.251652I$ $b = -0.791997 + 0.383839I$	$0.0964948 + 0.0089008I$	$8.72889 + 1.78884I$
$u = 0.315578 - 0.601032I$ $a = 0.503617 - 0.251652I$ $b = -0.791997 - 0.383839I$	$0.0964948 - 0.0089008I$	$8.72889 - 1.78884I$
$u = 1.116540 + 0.781013I$ $a = 0.09598 - 1.78346I$ $b = 1.60985 - 0.33470I$	$8.8856 - 17.9490I$	0
$u = 1.116540 - 0.781013I$ $a = 0.09598 + 1.78346I$ $b = 1.60985 + 0.33470I$	$8.8856 + 17.9490I$	0
$u = 0.631621 + 0.033317I$ $a = 1.51312 + 0.84039I$ $b = -0.405572 + 0.419755I$	$0.661340 - 0.006855I$	$6.27443 + 0.14507I$
$u = 0.631621 - 0.033317I$ $a = 1.51312 - 0.84039I$ $b = -0.405572 - 0.419755I$	$0.661340 + 0.006855I$	$6.27443 - 0.14507I$
$u = -1.367100 + 0.230820I$ $a = 1.23937 + 0.69907I$ $b = 1.46620 + 0.17323I$	$1.74514 + 9.44277I$	0
$u = -1.367100 - 0.230820I$ $a = 1.23937 - 0.69907I$ $b = 1.46620 - 0.17323I$	$1.74514 - 9.44277I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.928171 + 1.041260I$ $a = -0.464287 - 1.105230I$ $b = 1.366570 - 0.156407I$	$4.00815 - 5.73569I$	0
$u = 0.928171 - 1.041260I$ $a = -0.464287 + 1.105230I$ $b = 1.366570 + 0.156407I$	$4.00815 + 5.73569I$	0
$u = -1.136720 + 0.814396I$ $a = 0.11549 + 1.58367I$ $b = 1.56898 + 0.25496I$	$11.9617 + 11.4276I$	0
$u = -1.136720 - 0.814396I$ $a = 0.11549 - 1.58367I$ $b = 1.56898 - 0.25496I$	$11.9617 - 11.4276I$	0
$u = -0.567704 + 0.049733I$ $a = 2.53757 - 0.17750I$ $b = 0.221319 + 0.396733I$	$-1.28837 - 2.73018I$	$1.81368 + 4.98375I$
$u = -0.567704 - 0.049733I$ $a = 2.53757 + 0.17750I$ $b = 0.221319 - 0.396733I$	$-1.28837 + 2.73018I$	$1.81368 - 4.98375I$
$u = 0.492535$ $a = 1.20433$ $b = -0.404475$	0.865010	11.8760
$u = 1.46503 + 0.43564I$ $a = 0.883523 - 0.666348I$ $b = 1.43769 - 0.04329I$	$3.31775 - 1.96476I$	0
$u = 1.46503 - 0.43564I$ $a = 0.883523 + 0.666348I$ $b = 1.43769 + 0.04329I$	$3.31775 + 1.96476I$	0
$u = -0.320516 + 0.044395I$ $a = 5.68072 - 1.31126I$ $b = 1.143830 + 0.222060I$	$1.53644 + 5.31849I$	$9.85956 - 9.56569I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.320516-0.044395I$ $a=\ 5.68072+1.31126I$ $b=\ 1.143830-0.222060I$	$1.53644-5.31849I$	$9.85956+9.56569I$
$u=\ 0.272842$ $a=\ 6.43062$ $b=\ 1.21750$	5.22341	19.5660
$u=\ 0.0503739+0.0930732I$ $a=\ 5.19789+0.05121I$ $b=\ 1.64681-0.04361I$	$8.65745-1.68509I$	$4.64702-6.64522I$
$u=\ 0.0503739-0.0930732I$ $a=\ 5.19789-0.05121I$ $b=\ 1.64681+0.04361I$	$8.65745+1.68509I$	$4.64702+6.64522I$

II. $I_2^u = \langle -21u^{27} + 10u^{26} + \cdots + 2b - 19,\ -70u^{27} + 54u^{26} + \cdots + 2a - 63,\ u^{28} - 7u^{26} + \cdots - 7u^2 + 1 \rangle$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 35u^{27} - 27u^{26} + \cdots - \frac{53}{2}u + \frac{63}{2} \\ \frac{21}{2}u^{27} - 5u^{26} + \cdots - \frac{29}{2}u + \frac{19}{2} \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{7}{2}u^{27} + \frac{1}{2}u^{26} + \cdots + 16u - \frac{15}{2} \\ -\frac{19}{2}u^{27} + 4u^{26} + \cdots + \frac{27}{2}u - \frac{19}{2} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 7u^{27} - \frac{25}{2}u^{26} + \cdots + \frac{59}{2}u - 6 \\ \frac{13}{2}u^{27} - \frac{17}{2}u^{26} + \cdots + 2u + \frac{9}{2} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{49}{2}u^{27} - 22u^{26} + \cdots - 12u + 22 \\ \frac{21}{2}u^{27} - 5u^{26} + \cdots - \frac{29}{2}u + \frac{19}{2} \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -21u^{27} + 17u^{26} + \cdots + 6u - 14 \\ -13u^{27} + 9u^{26} + \cdots + \frac{41}{2}u - \frac{33}{2} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} \frac{37}{2}u^{27} - 6u^{26} + \cdots - 52u + 38 \\ \frac{5}{2}u^{27} - \frac{1}{2}u^{26} + \cdots - \frac{27}{2}u + 5 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{9}{2}u^{27} + \frac{3}{2}u^{26} + \cdots + 17u - \frac{17}{2} \\ -\frac{19}{2}u^{27} + 4u^{26} + \cdots + \frac{27}{2}u - \frac{19}{2} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{59}{2}u^{27} - \frac{9}{2}u^{26} + \cdots - \frac{227}{2}u + 64$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 14u^{27} + \cdots - 14u + 1$
c_2	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_3	$u^{28} - 2u^{26} + \cdots - 2u + 1$
c_4	$u^{28} + 10u^{26} + \cdots - 3u - 1$
c_5	$u^{28} - 16u^{26} + \cdots + u + 1$
c_6	$u^{28} - 7u^{26} + \cdots - 7u^2 + 1$
c_7	$u^{28} - 4u^{27} + \cdots - 4u + 1$
c_8	$u^{28} + u^{27} + \cdots - 2u^2 + 1$
c_9, c_{10}	$u^{28} - 16u^{26} + \cdots - u + 1$
c_{11}	$u^{28} + 4u^{27} + \cdots + 4u + 1$
c_{12}	$u^{28} + 10u^{26} + \cdots + 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} + 10y^{27} + \cdots + 18y + 1$
c_2, c_6	$y^{28} - 14y^{27} + \cdots - 14y + 1$
c_3	$y^{28} - 4y^{27} + \cdots - 4y + 1$
c_4, c_{12}	$y^{28} + 20y^{27} + \cdots - 7y + 1$
c_5, c_9, c_{10}	$y^{28} - 32y^{27} + \cdots - 13y + 1$
c_7, c_{11}	$y^{28} - 28y^{27} + \cdots - 16y + 1$
c_8	$y^{28} - 5y^{27} + \cdots - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.668515+0.746394I$ $a=-0.851993+0.615117I$ $b=-0.364367+0.452624I$	$0.61800+3.65858I$	$4.91335-4.40936I$
$u=-0.668515-0.746394I$ $a=-0.851993-0.615117I$ $b=-0.364367-0.452624I$	$0.61800-3.65858I$	$4.91335+4.40936I$
$u=-0.688677+0.688903I$ $a=-0.369091-0.060224I$ $b=\ \ 1.65329-0.15184I$	$9.91943-1.03347I$	$9.32606-4.07912I$
$u=-0.688677-0.688903I$ $a=-0.369091+0.060224I$ $b=\ \ 1.65329+0.15184I$	$9.91943+1.03347I$	$9.32606+4.07912I$
$u=\ \ 0.865295+0.661648I$ $a=-0.38336-1.40767I$ $b=-0.077502-0.759041I$	$3.13227-2.56707I$	$2.03427+2.13726I$
$u=\ \ 0.865295-0.661648I$ $a=-0.38336+1.40767I$ $b=-0.077502+0.759041I$	$3.13227+2.56707I$	$2.03427-2.13726I$
$u=\ \ 1.11972$ $a=-2.06731$ $b=-1.46009$	5.02893	7.77140
$u=-1.068830+0.373557I$ $a=\ \ 0.614259+0.253967I$ $b=\ \ 1.179210+0.173597I$	$-0.22121+7.34824I$	$6.78579-7.23665I$
$u=-1.068830-0.373557I$ $a=\ \ 0.614259-0.253967I$ $b=\ \ 1.179210-0.173597I$	$-0.22121-7.34824I$	$6.78579+7.23665I$
$u=\ \ 1.040580+0.448928I$ $a=\ \ 0.626491-0.823890I$ $b=\ \ 0.707568+0.339026I$	$-2.01586-5.44812I$	$6.15455+8.69837I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.040580 - 0.448928I$ $a = 0.626491 + 0.823890I$ $b = 0.707568 - 0.339026I$	$-2.01586 + 5.44812I$	$6.15455 - 8.69837I$
$u = -0.773805 + 0.242392I$ $a = 1.390750 - 0.109163I$ $b = -0.316335 - 0.355651I$	$0.684665 + 0.816998I$	$6.77993 - 8.92970I$
$u = -0.773805 - 0.242392I$ $a = 1.390750 + 0.109163I$ $b = -0.316335 + 0.355651I$	$0.684665 - 0.816998I$	$6.77993 + 8.92970I$
$u = 0.795858$ $a = -3.00041$ $b = -1.27495$	4.46659	7.95080
$u = -1.003760 + 0.667313I$ $a = -0.24598 - 2.18542I$ $b = -1.58862 - 0.21526I$	$8.94551 + 6.30756I$	$8.27551 - 3.18389I$
$u = -1.003760 - 0.667313I$ $a = -0.24598 + 2.18542I$ $b = -1.58862 + 0.21526I$	$8.94551 - 6.30756I$	$8.27551 + 3.18389I$
$u = 0.676617 + 0.389816I$ $a = 1.71792 + 0.80563I$ $b = -0.678439 + 0.489049I$	$-0.67094 + 1.87737I$	$7.43668 + 0.27311I$
$u = 0.676617 - 0.389816I$ $a = 1.71792 - 0.80563I$ $b = -0.678439 - 0.489049I$	$-0.67094 - 1.87737I$	$7.43668 - 0.27311I$
$u = -1.140950 + 0.481127I$ $a = 0.571863 + 0.591459I$ $b = 0.476281 + 0.109403I$	$-1.43114 + 1.51854I$	$11.39182 - 4.94892I$
$u = -1.140950 - 0.481127I$ $a = 0.571863 - 0.591459I$ $b = 0.476281 - 0.109403I$	$-1.43114 - 1.51854I$	$11.39182 + 4.94892I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.715551+0.255732I$ $a=-2.96022-0.55140I$ $b=-1.183940+0.248558I$	$1.23224-4.59759I$	$5.76933+0.63653I$
$u=-0.715551-0.255732I$ $a=-2.96022+0.55140I$ $b=-1.183940-0.248558I$	$1.23224+4.59759I$	$5.76933-0.63653I$
$u=0.766866+1.033780I$ $a=0.729535+1.124260I$ $b=-1.346890+0.166868I$	$4.29585-5.86423I$	$19.3353+15.9381I$
$u=0.766866-1.033780I$ $a=0.729535-1.124260I$ $b=-1.346890-0.166868I$	$4.29585+5.86423I$	$19.3353-15.9381I$
$u=1.310840+0.465943I$ $a=0.240552-0.250379I$ $b=1.265440+0.053577I$	$1.49245-0.89320I$	$0.+7.88936I$
$u=1.310840-0.465943I$ $a=0.240552+0.250379I$ $b=1.265440-0.053577I$	$1.49245+0.89320I$	$0.-7.88936I$
$u=0.442102+0.411322I$ $a=-0.046865+0.144269I$ $b=1.64181+0.00580I$	$8.74939-2.09273I$	$8.8828+11.2591I$
$u=0.442102-0.411322I$ $a=-0.046865-0.144269I$ $b=1.64181-0.00580I$	$8.74939+2.09273I$	$8.8828-11.2591I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28}-14u^{27}+\cdots-14u+1)(u^{114}+41u^{113}+\cdots-29u+1)$
c_2	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{114}-3u^{113}+\cdots-9u+1)$
c_3	$(u^{28}-2u^{26}+\cdots-2u+1)(u^{114}-u^{113}+\cdots+621u-135)$
c_4	$(u^{28}+10u^{26}+\cdots-3u-1)(u^{114}+5u^{113}+\cdots-4u+1)$
c_5	$(u^{28}-16u^{26}+\cdots+u+1)(u^{114}+u^{113}+\cdots-18u-19)$
c_6	$(u^{28}-7u^{26}+\cdots-7u^2+1)(u^{114}-3u^{113}+\cdots-9u+1)$
c_7	$(u^{28}-4u^{27}+\cdots-4u+1)(u^{114}+3u^{113}+\cdots+9623u-24763)$
c_8	$(u^{28}+u^{27}+\cdots-2u^2+1)(u^{114}+2u^{113}+\cdots+3u-1)$
c_9, c_{10}	$(u^{28}-16u^{26}+\cdots-u+1)(u^{114}+u^{113}+\cdots-18u-19)$
c_{11}	$(u^{28}+4u^{27}+\cdots+4u+1)(u^{114}+3u^{113}+\cdots+9623u-24763)$
c_{12}	$(u^{28}+10u^{26}+\cdots+3u-1)(u^{114}+5u^{113}+\cdots-4u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28}+10y^{27}+\cdots+18y+1)(y^{114}+75y^{113}+\cdots+6061y+1)$
c_2, c_6	$(y^{28}-14y^{27}+\cdots-14y+1)(y^{114}-41y^{113}+\cdots+29y+1)$
c_3	$(y^{28}-4y^{27}+\cdots-4y+1)(y^{114}-11y^{113}+\cdots-978561y+18225)$
c_4, c_{12}	$(y^{28}+20y^{27}+\cdots-7y+1)(y^{114}+65y^{113}+\cdots-44y+1)$
c_5, c_9, c_{10}	$(y^{28}-32y^{27}+\cdots-13y+1)(y^{114}-123y^{113}+\cdots+38854y+361)$
c_7, c_{11}	$(y^{28}-28y^{27}+\cdots-16y+1)$ $\cdot(y^{114}-99y^{113}+\cdots-42189999285y+613206169)$
c_8	$(y^{28}-5y^{27}+\cdots-4y+1)(y^{114}-8y^{113}+\cdots-169y+1)$