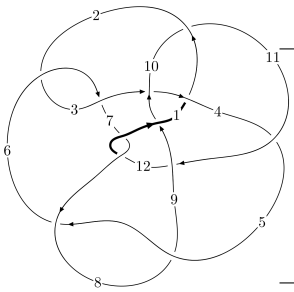
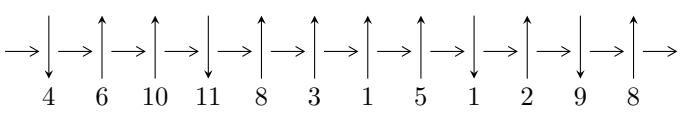
$12n_{0800}$ $(K12n_{0800})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -7.92227 \times 10^{321} u^{86} - 3.69003 \times 10^{322} u^{85} + \cdots + 2.21292 \times 10^{323} b - 4.49196 \times 10^{322},$$
$$- 5.95683 \times 10^{322} u^{86} - 2.93141 \times 10^{323} u^{85} + \cdots + 2.21292 \times 10^{323} a - 2.78972 \times 10^{323},$$
$$u^{87} + 5u^{86} + \cdots + 4u + 4 \rangle$$
$$I_2^u = \langle -3.25868 \times 10^{30} u^{29} + 3.07384 \times 10^{31} u^{28} + \cdots + 2.27509 \times 10^{31} b + 1.25975 \times 10^{31},$$
$$9.91315 \times 10^{31} u^{29} - 7.89725 \times 10^{32} u^{28} + \cdots + 2.27509 \times 10^{31} a + 6.40206 \times 10^{32},\ u^{30} - 8u^{29} + \cdots + 5u + 1 \rangle$$

* 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. $\boldsymbol{I_1^u = \langle -7.92 \times 10^{321} u^{86} - 3.69 \times 10^{322} u^{85} + \cdots + 2.21 \times 10^{323} b - 4.49 \times 10^{322},\ -5.96 \times 10^{322} u^{86} - 2.93 \times 10^{323} u^{85} + \cdots + 2.21 \times 10^{323} a - 2.79 \times 10^{323},\ u^{87} + 5u^{86} + \cdots + 4u + 4 \rangle}$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} 0.269184u^{86} + 1.32468u^{85} + \cdots - 19.4374u + 1.26065 \\ 0.0358000u^{86} + 0.166749u^{85} + \cdots - 8.38995u + 0.202988 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.680199u^{86} - 3.41770u^{85} + \cdots - 15.4169u - 3.56450 \\ 0.111567u^{86} + 0.524563u^{85} + \cdots - 0.0651331u - 1.20855 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.222580u^{86} + 1.11462u^{85} + \cdots - 12.0392u + 1.14263 \\ 0.0130509u^{86} + 0.0574080u^{85} + \cdots - 8.29540u + 0.111121 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.825564u^{86} - 4.14608u^{85} + \cdots - 9.76061u - 1.75430 \\ 0.0999887u^{86} + 0.508035u^{85} + \cdots + 2.57177u - 0.461771 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.235631u^{86} + 1.17203u^{85} + \cdots - 20.3346u + 1.25375 \\ 0.0130509u^{86} + 0.0574080u^{85} + \cdots - 8.29540u + 0.111121 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.395173u^{86} + 1.73507u^{85} + \cdots - 7.11517u + 0.677846 \\ -0.0892168u^{86} - 0.463239u^{85} + \cdots - 8.03508u - 0.827379 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.323432u^{86} + 1.78313u^{85} + \cdots - 27.4861u - 4.51913 \\ 0.0981978u^{86} + 0.425811u^{85} + \cdots - 5.99692u + 0.687737 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.356479u^{86} - 2.16611u^{85} + \cdots + 3.37461u + 3.34404 \\ -0.187301u^{86} - 0.872331u^{85} + \cdots + 0.697416u - 2.13808 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.225234u^{86} - 1.35732u^{85} + \cdots + 21.4892u + 5.20687 \\ -0.0981978u^{86} - 0.425811u^{85} + \cdots + 5.99692u - 0.687737 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.150725u^{86} + 0.590384u^{85} + \cdots - 62.7762u + 6.33261$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{87} - 5u^{86} + \cdots + 4u - 4$
c_2, c_6	$u^{87} + u^{86} + \cdots - 352u - 43$
c_3	$u^{87} - 10u^{85} + \cdots - 133313u - 18803$
c_4	$u^{87} - 2u^{86} + \cdots + 6903u - 691$
c_5, c_8	$u^{87} + 4u^{86} + \cdots - 156u - 29$
c_7, c_{12}	$u^{87} - 40u^{85} + \cdots + 41988135u - 3861113$
c_9	$u^{87} - 3u^{86} + \cdots - 1157278u - 318509$
c_{10}	$u^{87} - 7u^{86} + \cdots + 884u + 71$
c_{11}	$u^{87} - 2u^{86} + \cdots + 141578544u + 6358336$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{87} - 21y^{86} + \cdots + 632y - 16$
c_2, c_6	$y^{87} - 63y^{86} + \cdots + 52954y - 1849$
c_3	$y^{87} - 20y^{86} + \cdots + 6084674411y - 353552809$
c_4	$y^{87} - 36y^{86} + \cdots + 6991587y - 477481$
c_5, c_8	$y^{87} + 24y^{86} + \cdots - 20150y - 841$
c_7, c_{12}	$y^{87} - 80y^{86} + \cdots - 64642179821373y - 14908193598769$
c_9	$y^{87} + 49y^{86} + \cdots - 124754575690068y - 101447983081$
c_{10}	$y^{87} - y^{86} + \cdots + 1220520y - 5041$
c_{11}	$y^{87} + 42y^{86} + \cdots + 15642609176560384y - 40428436688896$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.912192 + 0.401975I$ $a = 1.71620 + 0.38603I$ $b = 1.218770 + 0.339427I$	$2.78525 - 8.03445I$	0
$u = 0.912192 - 0.401975I$ $a = 1.71620 - 0.38603I$ $b = 1.218770 - 0.339427I$	$2.78525 + 8.03445I$	0
$u = 0.063304 + 1.009710I$ $a = -0.384643 - 1.145980I$ $b = -0.348157 - 0.850557I$	$5.78686 + 4.25193I$	0
$u = 0.063304 - 1.009710I$ $a = -0.384643 + 1.145980I$ $b = -0.348157 + 0.850557I$	$5.78686 - 4.25193I$	0
$u = 0.453234 + 0.912797I$ $a = -0.028386 - 1.020130I$ $b = 0.41597 - 1.37970I$	$5.44822 - 2.84020I$	0
$u = 0.453234 - 0.912797I$ $a = -0.028386 + 1.020130I$ $b = 0.41597 + 1.37970I$	$5.44822 + 2.84020I$	0
$u = -0.694539 + 0.782085I$ $a = -0.64714 + 1.25869I$ $b = 0.410123 - 0.062150I$	$9.43262 + 3.01438I$	0
$u = -0.694539 - 0.782085I$ $a = -0.64714 - 1.25869I$ $b = 0.410123 + 0.062150I$	$9.43262 - 3.01438I$	0
$u = -0.416393 + 0.963809I$ $a = 0.339992 + 0.197096I$ $b = 0.467908 + 0.587539I$	$3.48674 + 2.87950I$	0
$u = -0.416393 - 0.963809I$ $a = 0.339992 - 0.197096I$ $b = 0.467908 - 0.587539I$	$3.48674 - 2.87950I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.785521+0.699014I$ $a=\ 0.993051+0.291711I$ $b=\ 1.49665+0.40739I$	$-3.25758+8.20249I$	0
$u=-0.785521-0.699014I$ $a=\ 0.993051-0.291711I$ $b=\ 1.49665-0.40739I$	$-3.25758-8.20249I$	0
$u=\ 0.816587+0.473890I$ $a=\ 1.81569+0.51492I$ $b=\ 0.719364+0.598319I$	$3.76903-1.56318I$	$4.00000+3.26305I$
$u=\ 0.816587-0.473890I$ $a=\ 1.81569-0.51492I$ $b=\ 0.719364-0.598319I$	$3.76903+1.56318I$	$4.00000-3.26305I$
$u=\ 0.147112+1.065990I$ $a=-0.401964+0.609701I$ $b=\ 0.111488+0.446761I$	$2.45312-4.65946I$	0
$u=\ 0.147112-1.065990I$ $a=-0.401964-0.609701I$ $b=\ 0.111488-0.446761I$	$2.45312+4.65946I$	0
$u=\ 0.931256+0.572305I$ $a=\ 0.785536-0.187780I$ $b=\ 1.57831-0.64495I$	$-3.96504-1.92363I$	0
$u=\ 0.931256-0.572305I$ $a=\ 0.785536+0.187780I$ $b=\ 1.57831+0.64495I$	$-3.96504+1.92363I$	0
$u=\ 0.892042+0.148083I$ $a=-0.422634+0.204443I$ $b=-0.593358-1.050630I$	$-2.69372-2.16255I$	$-0.88908+4.42862I$
$u=\ 0.892042-0.148083I$ $a=-0.422634-0.204443I$ $b=-0.593358+1.050630I$	$-2.69372+2.16255I$	$-0.88908-4.42862I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.548120+0.988311I$ $a=\ \ 0.701455-0.520019I$ $b=-0.165990-0.329990I$	$2.34699-1.37288I$	0
$u=-0.548120-0.988311I$ $a=\ \ 0.701455+0.520019I$ $b=-0.165990+0.329990I$	$2.34699+1.37288I$	0
$u=-0.484874+1.021390I$ $a=\ \ 0.250420-0.050777I$ $b=\ \ 0.290233+0.553102I$	$3.50028+2.86892I$	0
$u=-0.484874-1.021390I$ $a=\ \ 0.250420+0.050777I$ $b=\ \ 0.290233-0.553102I$	$3.50028-2.86892I$	0
$u=\ \ 0.460721+0.683739I$ $a=\ \ 0.915361+0.110361I$ $b=\ \ 0.160669-0.135663I$	$0.11406-1.55831I$	$1.29774+4.43942I$
$u=\ \ 0.460721-0.683739I$ $a=\ \ 0.915361-0.110361I$ $b=\ \ 0.160669+0.135663I$	$0.11406+1.55831I$	$1.29774-4.43942I$
$u=-0.787268+0.887666I$ $a=-0.817774+1.041560I$ $b=\ \ 0.518701+0.366589I$	$9.35877+9.75636I$	0
$u=-0.787268-0.887666I$ $a=-0.817774-1.041560I$ $b=\ \ 0.518701-0.366589I$	$9.35877-9.75636I$	0
$u=-1.007710+0.645864I$ $a=-1.177580-0.334928I$ $b=-2.65128+0.45417I$	$-2.03670+4.04341I$	0
$u=-1.007710-0.645864I$ $a=-1.177580+0.334928I$ $b=-2.65128-0.45417I$	$-2.03670-4.04341I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.377151 + 1.147650I$ $a = -0.483019 - 0.604530I$ $b = 0.545999 + 0.569923I$	$4.00465 + 2.11919I$	0
$u = 0.377151 - 1.147650I$ $a = -0.483019 + 0.604530I$ $b = 0.545999 - 0.569923I$	$4.00465 - 2.11919I$	0
$u = -1.106240 + 0.490549I$ $a = -0.947435 - 0.589082I$ $b = -1.36762 + 0.53535I$	$-1.29962 + 1.65088I$	0
$u = -1.106240 - 0.490549I$ $a = -0.947435 + 0.589082I$ $b = -1.36762 - 0.53535I$	$-1.29962 - 1.65088I$	0
$u = -1.170960 + 0.382675I$ $a = 0.706683 - 0.206861I$ $b = 2.42929 - 1.12143I$	$7.91042 + 1.84125I$	0
$u = -1.170960 - 0.382675I$ $a = 0.706683 + 0.206861I$ $b = 2.42929 + 1.12143I$	$7.91042 - 1.84125I$	0
$u = 0.281224 + 0.709242I$ $a = -0.89796 + 1.43996I$ $b = -0.892007 - 0.507078I$	$-2.20998 - 5.06993I$	$1.66963 + 6.40826I$
$u = 0.281224 - 0.709242I$ $a = -0.89796 - 1.43996I$ $b = -0.892007 + 0.507078I$	$-2.20998 + 5.06993I$	$1.66963 - 6.40826I$
$u = -0.657198 + 0.307147I$ $a = 1.88727 + 0.07366I$ $b = 1.51953 - 0.47787I$	$-0.87663 + 6.37484I$	$6.19951 + 2.37879I$
$u = -0.657198 - 0.307147I$ $a = 1.88727 - 0.07366I$ $b = 1.51953 + 0.47787I$	$-0.87663 - 6.37484I$	$6.19951 - 2.37879I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.155190+0.687197I$ $a=\ \ 0.719993-0.282618I$ $b=\ \ 1.68780-1.60413I$	$8.22587-3.64595I$	0
$u=-1.155190-0.687197I$ $a=\ \ 0.719993+0.282618I$ $b=\ \ 1.68780+1.60413I$	$8.22587+3.64595I$	0
$u=\ \ 0.643999+0.109479I$ $a=\ \ 1.061680+0.694693I$ $b=-0.030351-0.437816I$	$-3.39381-0.96598I$	$0.39517+7.21957I$
$u=\ \ 0.643999-0.109479I$ $a=\ \ 1.061680-0.694693I$ $b=-0.030351+0.437816I$	$-3.39381+0.96598I$	$0.39517-7.21957I$
$u=-0.566702+0.198795I$ $a=-1.98171-0.36620I$ $b=-1.39477+0.43507I$	$-2.60998+1.32687I$	$0.720881-0.280633I$
$u=-0.566702-0.198795I$ $a=-1.98171+0.36620I$ $b=-1.39477-0.43507I$	$-2.60998-1.32687I$	$0.720881+0.280633I$
$u=\ \ 0.741085+1.188570I$ $a=-0.341339-0.507587I$ $b=\ \ 0.647963+0.071670I$	$3.72251-4.38135I$	0
$u=\ \ 0.741085-1.188570I$ $a=-0.341339+0.507587I$ $b=\ \ 0.647963-0.071670I$	$3.72251+4.38135I$	0
$u=-0.572023+0.086882I$ $a=\ \ 1.75123-0.18932I$ $b=\ \ 0.202750+0.708885I$	$-3.14226-4.80021I$	$6.02675+3.57707I$
$u=-0.572023-0.086882I$ $a=\ \ 1.75123+0.18932I$ $b=\ \ 0.202750-0.708885I$	$-3.14226+4.80021I$	$6.02675-3.57707I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.440749+0.367901I$ $a=\ 1.71358+0.03534I$ $b=\ 0.574482-0.388650I$	$1.47462-0.14531I$	$7.13969+3.49282I$
$u=-0.440749-0.367901I$ $a=\ 1.71358-0.03534I$ $b=\ 0.574482+0.388650I$	$1.47462+0.14531I$	$7.13969-3.49282I$
$u=-1.22331+0.82785I$ $a=-0.855548+0.140813I$ $b=-1.58797+1.11307I$	$0.27819+8.09027I$	0
$u=-1.22331-0.82785I$ $a=-0.855548-0.140813I$ $b=-1.58797-1.11307I$	$0.27819-8.09027I$	0
$u=-1.06015+1.03363I$ $a=\ 0.999482+0.206134I$ $b=\ 1.76783-0.88695I$	$6.94845+10.55380I$	0
$u=-1.06015-1.03363I$ $a=\ 0.999482-0.206134I$ $b=\ 1.76783+0.88695I$	$6.94845-10.55380I$	0
$u=\ 1.14479+1.03666I$ $a=\ 0.815763-0.109466I$ $b=\ 1.54275+1.18017I$	$2.52234-3.55910I$	0
$u=\ 1.14479-1.03666I$ $a=\ 0.815763+0.109466I$ $b=\ 1.54275-1.18017I$	$2.52234+3.55910I$	0
$u=-1.05813+1.12751I$ $a=\ 0.145464+0.730331I$ $b=\ 1.087400-0.008770I$	$7.10114-2.70607I$	0
$u=-1.05813-1.12751I$ $a=\ 0.145464-0.730331I$ $b=\ 1.087400+0.008770I$	$7.10114+2.70607I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.32042+0.82197I$ $a=-0.533477-0.058376I$ $b=-1.75928+0.27907I$	$0.77190+4.16807I$	0
$u=-1.32042-0.82197I$ $a=-0.533477+0.058376I$ $b=-1.75928-0.27907I$	$0.77190-4.16807I$	0
$u=-0.437998$ $a=\ \ 1.57305$ $b=\ \ 0.228308$	1.19704	7.87590
$u=\ \ 1.24751+0.95031I$ $a=-0.736747+0.461163I$ $b=-2.02741-0.23872I$	$-6.47758-2.96918I$	0
$u=\ \ 1.24751-0.95031I$ $a=-0.736747-0.461163I$ $b=-2.02741+0.23872I$	$-6.47758+2.96918I$	0
$u=-1.18844+1.02512I$ $a=\ \ 1.004850+0.214529I$ $b=\ \ 2.19066-1.08284I$	$5.7235+17.6063I$	0
$u=-1.18844-1.02512I$ $a=\ \ 1.004850-0.214529I$ $b=\ \ 2.19066+1.08284I$	$5.7235-17.6063I$	0
$u=-1.09223+1.13307I$ $a=-0.662443-0.450886I$ $b=-2.15973+0.59397I$	$-0.10678+5.66380I$	0
$u=-1.09223-1.13307I$ $a=-0.662443+0.450886I$ $b=-2.15973-0.59397I$	$-0.10678-5.66380I$	0
$u=-0.112776+0.384345I$ $a=\ \ 5.57611-5.50713I$ $b=-1.006150+0.062796I$	$-0.0371163-0.0367021I$	$-8.4334-13.9645I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.112776-0.384345I$ $a=\ \ 5.57611+5.50713I$ $b=-1.006150-0.062796I$	$-0.0371163+0.0367021I$	$-8.4334+13.9645I$
$u=\ \ 1.35698+0.93075I$ $a=\ \ 0.814355-0.101972I$ $b=\ \ 2.29464+1.25421I$	$1.14531-9.78347I$	0
$u=\ \ 1.35698-0.93075I$ $a=\ \ 0.814355+0.101972I$ $b=\ \ 2.29464-1.25421I$	$1.14531+9.78347I$	0
$u=-0.094411+0.338574I$ $a=\ \ 0.87849-1.44245I$ $b=\ \ 2.05669+0.94373I$	$8.05058+0.40994I$	$18.7140+3.3872I$
$u=-0.094411-0.338574I$ $a=\ \ 0.87849+1.44245I$ $b=\ \ 2.05669-0.94373I$	$8.05058-0.40994I$	$18.7140-3.3872I$
$u=\ \ 0.312702+0.159104I$ $a=\ \ 2.77994-0.20053I$ $b=\ \ 2.32458+2.43420I$	$5.59090-6.35630I$	$-0.1485+15.1289I$
$u=\ \ 0.312702-0.159104I$ $a=\ \ 2.77994+0.20053I$ $b=\ \ 2.32458-2.43420I$	$5.59090+6.35630I$	$-0.1485-15.1289I$
$u=-0.95311+1.37768I$ $a=\ \ 0.053807+0.760361I$ $b=\ \ 1.327890-0.448270I$	$6.72564-9.19457I$	0
$u=-0.95311-1.37768I$ $a=\ \ 0.053807-0.760361I$ $b=\ \ 1.327890+0.448270I$	$6.72564+9.19457I$	0
$u=\ \ 1.18578+1.18641I$ $a=-0.730372+0.476175I$ $b=-1.79404-0.86269I$	$-5.77689-5.71907I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.18578 - 1.18641I$ $a = -0.730372 - 0.476175I$ $b = -1.79404 + 0.86269I$	$-5.77689 + 5.71907I$	0
$u = \quad 0.233582 + 0.040081I$ $a = -6.96917 - 1.14129I$ $b = -0.838345 + 0.317215I$	$0.311077 - 0.458631I$	$2.75665 + 5.13065I$
$u = \quad 0.233582 - 0.040081I$ $a = -6.96917 + 1.14129I$ $b = -0.838345 - 0.317215I$	$0.311077 + 0.458631I$	$2.75665 - 5.13065I$
$u = \quad 1.92037 + 0.28539I$ $a = -0.599470 + 0.151895I$ $b = -3.00149 - 0.04689I$	$-7.66564 - 0.71189I$	0
$u = \quad 1.92037 - 0.28539I$ $a = -0.599470 - 0.151895I$ $b = -3.00149 + 0.04689I$	$-7.66564 + 0.71189I$	0
$u = \quad 2.09382 + 0.09189I$ $a = -0.344115 - 0.080336I$ $b = -2.08465 - 0.48560I$	$-5.77352 - 2.12518I$	0
$u = \quad 2.09382 - 0.09189I$ $a = -0.344115 + 0.080336I$ $b = -2.08465 + 0.48560I$	$-5.77352 + 2.12518I$	0

II.

$\boldsymbol{I_2^u = \langle -3.26\times 10^{30}u^{29}+3.07\times 10^{31}u^{28}+\cdots+2.28\times 10^{31}b+1.26\times 10^{31},\ 9.91\times 10^{31}u^{29}-7.90\times 10^{32}u^{28}+\cdots+2.28\times 10^{31}a+6.40\times 10^{32},\ u^{30}-8u^{29}+\cdots+5u+1\rangle}$

(i) Arc colorings

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

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

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

$$a_{11} = \begin{pmatrix} -4.35726u^{29} + 34.7118u^{28} + \cdots - 11.4934u - 28.1398 \\ 0.143233u^{29} - 1.35109u^{28} + \cdots + 2.21771u - 0.553715 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 32.4699u^{29} - 264.608u^{28} + \cdots + 107.589u + 152.261 \\ 1.04679u^{29} - 8.54165u^{28} + \cdots + 1.93436u + 6.39287 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.45609u^{29} + 26.9760u^{28} + \cdots - 8.62249u - 27.4399 \\ 0.637967u^{29} - 5.66845u^{28} + \cdots + 3.94896u - 0.0272306 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 29.2569u^{29} - 235.969u^{28} + \cdots + 90.1819u + 149.419 \\ -1.19067u^{29} + 11.3015u^{28} + \cdots - 10.4421u + 3.21100 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -2.81812u^{29} + 21.3075u^{28} + \cdots - 4.67353u - 27.4671 \\ 0.637967u^{29} - 5.66845u^{28} + \cdots + 3.94896u - 0.0272306 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 2.38336u^{29} - 20.9011u^{28} + \cdots + 12.2620u + 4.97176 \\ 1.70365u^{29} - 14.7732u^{28} + \cdots + 7.33375u + 2.02151 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -5.57532u^{29} + 48.4654u^{28} + \cdots - 32.7344u - 13.3998 \\ 0.313551u^{29} - 2.67450u^{28} + \cdots + 2.41495u + 0.394386 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 36.6261u^{29} - 301.275u^{28} + \cdots + 128.389u + 157.033 \\ 1.01379u^{29} - 8.31609u^{28} + \cdots + 2.17156u + 6.40119 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -5.88887u^{29} + 51.1399u^{28} + \cdots - 35.1493u - 13.7942 \\ 0.313551u^{29} - 2.67450u^{28} + \cdots + 2.41495u + 0.394386 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -73.4402u^{29} + 601.455u^{28} + \cdots - 270.631u - 331.472$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} - 8u^{29} + \cdots + 5u + 1$
c_2	$u^{30} - 2u^{29} + \cdots - u + 1$
c_3	$u^{30} + 7u^{29} + \cdots - 2u + 1$
c_4	$u^{30} + 7u^{29} + \cdots - 4u + 17$
c_5	$u^{30} + 7u^{29} + \cdots + 11u + 1$
c_6	$u^{30} + 2u^{29} + \cdots + u + 1$
c_7	$u^{30} - u^{29} + \cdots - 22u + 1$
c_8	$u^{30} - 7u^{29} + \cdots - 11u + 1$
c_9	$u^{30} + 6u^{29} + \cdots + 3u + 1$
c_{10}	$u^{30} + 4u^{28} + \cdots + 9u + 1$
c_{11}	$u^{30} + 5u^{29} + \cdots + 702u + 324$
c_{12}	$u^{30} + u^{29} + \cdots + 22u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} - 16y^{29} + \cdots - 27y + 1$
c_2, c_6	$y^{30} - 14y^{29} + \cdots - 13y + 1$
c_3	$y^{30} - 27y^{29} + \cdots - 10y + 1$
c_4	$y^{30} - 51y^{29} + \cdots - 5762y + 289$
c_5, c_8	$y^{30} + 13y^{29} + \cdots - 17y + 1$
c_7, c_{12}	$y^{30} + y^{29} + \cdots - 162y + 1$
c_9	$y^{30} + 10y^{29} + \cdots + 221y + 1$
c_{10}	$y^{30} + 8y^{29} + \cdots - 103y + 1$
c_{11}	$y^{30} + 7y^{29} + \cdots + 1799172y + 104976$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.922928+0.587538I$ $a=-0.945123-0.371366I$ $b=-2.12791-0.57187I$	$-3.96611+7.21759I$	$-0.87488-5.62385I$
$u=-0.922928-0.587538I$ $a=-0.945123+0.371366I$ $b=-2.12791+0.57187I$	$-3.96611-7.21759I$	$-0.87488+5.62385I$
$u=\ 0.704491+0.496236I$ $a=\ 1.57500-0.31600I$ $b=\ 1.46524+0.51141I$	$-1.00133-6.83745I$	$2.05753+13.48275I$
$u=\ 0.704491-0.496236I$ $a=\ 1.57500+0.31600I$ $b=\ 1.46524-0.51141I$	$-1.00133+6.83745I$	$2.05753-13.48275I$
$u=\ 0.386560+1.109940I$ $a=-0.051401-0.462394I$ $b=\ 0.304135-0.577341I$	$2.50276-3.64171I$	$2.92014+2.19640I$
$u=\ 0.386560-1.109940I$ $a=-0.051401+0.462394I$ $b=\ 0.304135+0.577341I$	$2.50276+3.64171I$	$2.92014-2.19640I$
$u=-0.263153+1.160860I$ $a=-0.431578-0.621044I$ $b=-0.407030-0.132485I$	$2.87178+3.78144I$	$6.31019-4.19604I$
$u=-0.263153-1.160860I$ $a=-0.431578+0.621044I$ $b=-0.407030+0.132485I$	$2.87178-3.78144I$	$6.31019+4.19604I$
$u=\ 0.500940+0.629952I$ $a=\ 1.68166-0.06066I$ $b=\ 0.303310+0.498258I$	$1.43876-0.76884I$	$6.64471+4.27009I$
$u=\ 0.500940-0.629952I$ $a=\ 1.68166+0.06066I$ $b=\ 0.303310-0.498258I$	$1.43876+0.76884I$	$6.64471-4.27009I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.743487+0.011194I$ $a=-1.58893+0.46371I$ $b=-0.672210-0.441056I$	$-3.76793-4.74109I$	$-6.96064+3.57575I$
$u=-0.743487-0.011194I$ $a=-1.58893-0.46371I$ $b=-0.672210+0.441056I$	$-3.76793+4.74109I$	$-6.96064-3.57575I$
$u=\ \ 0.641333+0.136681I$ $a=-0.906364+1.074960I$ $b=-0.329411-0.850433I$	$-3.51250+0.24334I$	$-1.82124+2.49290I$
$u=\ \ 0.641333-0.136681I$ $a=-0.906364-1.074960I$ $b=-0.329411+0.850433I$	$-3.51250-0.24334I$	$-1.82124-2.49290I$
$u=-0.609580+0.204219I$ $a=\ \ 0.407913+0.650635I$ $b=\ \ 2.23585+0.71430I$	$7.62000+0.50528I$	$0.258078-0.196315I$
$u=-0.609580-0.204219I$ $a=\ \ 0.407913-0.650635I$ $b=\ \ 2.23585-0.71430I$	$7.62000-0.50528I$	$0.258078+0.196315I$
$u=-0.573695$ $a=-3.33723$ $b=-0.970491$	-0.112514	-7.33930
$u=-0.234236+0.490295I$ $a=-0.02926+1.74200I$ $b=\ \ 1.79609+1.69689I$	$5.83320-6.00958I$	$10.35590+0.19003I$
$u=-0.234236-0.490295I$ $a=-0.02926-1.74200I$ $b=\ \ 1.79609-1.69689I$	$5.83320+6.00958I$	$10.35590-0.19003I$
$u=\ \ 1.17894+0.89891I$ $a=-0.806852+0.440198I$ $b=-1.97344-0.14521I$	$-6.51184-2.43468I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.17894 - 0.89891I$ $a = -0.806852 - 0.440198I$ $b = -1.97344 + 0.14521I$	$-6.51184 + 2.43468I$	0
$u = -1.24538 + 0.97708I$ $a = -0.714351 - 0.298346I$ $b = -2.34521 + 0.62696I$	$-0.25045 + 5.04299I$	0
$u = -1.24538 - 0.97708I$ $a = -0.714351 + 0.298346I$ $b = -2.34521 - 0.62696I$	$-0.25045 - 5.04299I$	0
$u = \quad 1.15151 + 1.21077I$ $a = -0.710752 + 0.517304I$ $b = -1.70800 - 0.84973I$	$-5.59793 - 5.98728I$	0
$u = \quad 1.15151 - 1.21077I$ $a = -0.710752 - 0.517304I$ $b = -1.70800 + 0.84973I$	$-5.59793 + 5.98728I$	0
$u = -0.245930$ $a = -19.5202$ $b = -1.01937$	0.0131283	-196.150
$u = \quad 1.88508 + 0.17326I$ $a = -0.620542 + 0.087183I$ $b = -3.08908 + 0.19184I$	$-7.58112 - 1.13122I$	0
$u = \quad 1.88508 - 0.17326I$ $a = -0.620542 - 0.087183I$ $b = -3.08908 - 0.19184I$	$-7.58112 + 1.13122I$	0
$u = \quad 1.97973 + 0.12368I$ $a = -0.430688 - 0.048129I$ $b = -1.95742 - 0.56422I$	$-6.12186 - 2.02764I$	0
$u = \quad 1.97973 - 0.12368I$ $a = -0.430688 + 0.048129I$ $b = -1.95742 + 0.56422I$	$-6.12186 + 2.02764I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{30}-8u^{29}+\cdots+5u+1)(u^{87}-5u^{86}+\cdots+4u-4)$
c_2	$(u^{30}-2u^{29}+\cdots-u+1)(u^{87}+u^{86}+\cdots-352u-43)$
c_3	$(u^{30}+7u^{29}+\cdots-2u+1)(u^{87}-10u^{85}+\cdots-133313u-18803)$
c_4	$(u^{30}+7u^{29}+\cdots-4u+17)(u^{87}-2u^{86}+\cdots+6903u-691)$
c_5	$(u^{30}+7u^{29}+\cdots+11u+1)(u^{87}+4u^{86}+\cdots-156u-29)$
c_6	$(u^{30}+2u^{29}+\cdots+u+1)(u^{87}+u^{86}+\cdots-352u-43)$
c_7	$(u^{30}-u^{29}+\cdots-22u+1)$ $\cdot(u^{87}-40u^{85}+\cdots+41988135u-3861113)$
c_8	$(u^{30}-7u^{29}+\cdots-11u+1)(u^{87}+4u^{86}+\cdots-156u-29)$
c_9	$(u^{30}+6u^{29}+\cdots+3u+1)(u^{87}-3u^{86}+\cdots-1157278u-318509)$
c_{10}	$(u^{30}+4u^{28}+\cdots+9u+1)(u^{87}-7u^{86}+\cdots+884u+71)$
c_{11}	$(u^{30}+5u^{29}+\cdots+702u+324)$ $\cdot(u^{87}-2u^{86}+\cdots+141578544u+6358336)$
c_{12}	$(u^{30}+u^{29}+\cdots+22u+1)$ $\cdot(u^{87}-40u^{85}+\cdots+41988135u-3861113)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{30}-16y^{29}+\cdots-27y+1)(y^{87}-21y^{86}+\cdots+632y-16)$
c_2, c_6	$(y^{30}-14y^{29}+\cdots-13y+1)(y^{87}-63y^{86}+\cdots+52954y-1849)$
c_3	$(y^{30}-27y^{29}+\cdots-10y+1)$ $\cdot(y^{87}-20y^{86}+\cdots+6084674411y-353552809)$
c_4	$(y^{30}-51y^{29}+\cdots-5762y+289)$ $\cdot(y^{87}-36y^{86}+\cdots+6991587y-477481)$
c_5, c_8	$(y^{30}+13y^{29}+\cdots-17y+1)(y^{87}+24y^{86}+\cdots-20150y-841)$
c_7, c_{12}	$(y^{30}+y^{29}+\cdots-162y+1)$ $\cdot(y^{87}-80y^{86}+\cdots-64642179821373y-14908193598769)$
c_9	$(y^{30}+10y^{29}+\cdots+221y+1)$ $\cdot(y^{87}+49y^{86}+\cdots-124754575690068y-101447983081)$
c_{10}	$(y^{30}+8y^{29}+\cdots-103y+1)(y^{87}-y^{86}+\cdots+1220520y-5041)$
c_{11}	$(y^{30}+7y^{29}+\cdots+1799172y+104976)$ $\cdot(y^{87}+42y^{86}+\cdots+15642609176560384y-40428436688896)$