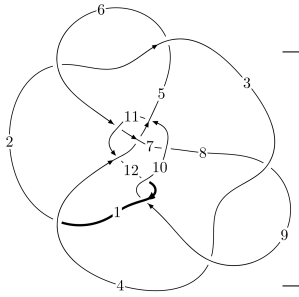
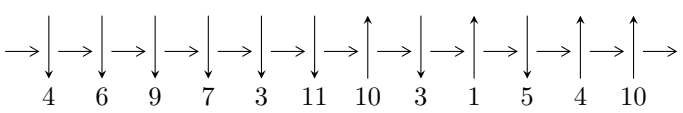
$12n_{0783}$ $(K12n_{0783})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -5.05060 \times 10^{389} u^{96} + 5.72708 \times 10^{389} u^{95} + \cdots + 2.60152 \times 10^{390} b + 2.75118 \times 10^{390}, \\ & - 2.62698 \times 10^{389} u^{96} + 8.51804 \times 10^{389} u^{95} + \cdots + 2.60152 \times 10^{390} a - 6.09559 \times 10^{391}, \\ & u^{97} - u^{96} + \cdots - 26u - 1 \rangle \\ I_2^u = \langle & 2.13340 \times 10^{23} u^{33} + 3.36277 \times 10^{23} u^{32} + \cdots + 5.15575 \times 10^{22} b - 2.19695 \times 10^{23}, \\ & 6.92894 \times 10^{22} u^{33} + 2.64178 \times 10^{22} u^{32} + \cdots + 5.15575 \times 10^{22} a + 3.17866 \times 10^{22}, \ u^{34} + 2u^{33} + \cdots + 2u + 1 \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 131 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. $\boldsymbol{I_1^u = \langle -5.05 \times 10^{389} u^{96} + 5.73 \times 10^{389} u^{95} + \cdots + 2.60 \times 10^{390} b + 2.75 \times 10^{390},\ -2.63 \times 10^{389} u^{96} + 8.52 \times 10^{389} u^{95} + \cdots + 2.60 \times 10^{390} a - 6.10 \times 10^{391},\ u^{97} - u^{96} + \cdots - 26u - 1 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.100978u^{96} - 0.327425u^{95} + \cdots + 391.203u + 23.4308 \\ 0.194140u^{96} - 0.220143u^{95} + \cdots - 21.0064u - 1.05753 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.100978u^{96} - 0.327425u^{95} + \cdots + 391.203u + 23.4308 \\ 0.220457u^{96} - 0.252020u^{95} + \cdots - 26.7930u - 1.28397 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1.23839u^{96} - 1.73803u^{95} + \cdots + 326.757u + 15.7854 \\ 0.170008u^{96} - 0.191437u^{95} + \cdots - 15.7017u - 0.857083 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -3.70848u^{96} + 4.83210u^{95} + \cdots + 72.9539u + 16.7184 \\ 0.211595u^{96} - 0.250722u^{95} + \cdots - 36.1278u - 1.45422 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -3.59279u^{96} + 4.62876u^{95} + \cdots - 240.869u - 6.99467 \\ -0.0810977u^{96} + 0.0659827u^{95} + \cdots + 3.16747u + 0.177008 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -3.51169u^{96} + 4.56278u^{95} + \cdots - 244.037u - 7.17168 \\ -0.0810977u^{96} + 0.0659827u^{95} + \cdots + 3.16747u + 0.177008 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -8.70315u^{96} + 9.85411u^{95} + \cdots + 771.754u + 31.4956 \\ 0.318091u^{96} - 0.370413u^{95} + \cdots - 44.5790u - 2.59273 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -7.27267u^{96} + 9.07460u^{95} + \cdots - 250.054u - 15.9505 \\ -0.429364u^{96} + 0.436517u^{95} + \cdots + 57.8522u + 2.72828 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4.81068u^{96} - 5.73756u^{95} + \cdots - 506.753u - 29.0779$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{97} - 11u^{96} + \cdots - 374950992u + 77123381$
c_2, c_5	$u^{97} + u^{96} + \cdots - 26u + 1$
c_3, c_8	$u^{97} - u^{96} + \cdots - 1679u + 193$
c_4	$u^{97} - 5u^{96} + \cdots + 2u + 1$
c_6	$u^{97} + u^{96} + \cdots - 51516u + 41391$
c_7	$u^{97} + 5u^{96} + \cdots - 340064u + 80363$
c_9, c_{12}	$u^{97} - 6u^{96} + \cdots + 369u + 77$
c_{10}	$u^{97} - u^{96} + \cdots - 334u + 5$
c_{11}	$u^{97} - 3u^{96} + \cdots + 1176280393u + 231783103$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{97} + 19y^{96} + \cdots - 39629618873565244y - 5948015896871161$
c_2, c_5	$y^{97} + 71y^{96} + \cdots - 140y - 1$
c_3, c_8	$y^{97} - 33y^{96} + \cdots + 1583455y - 37249$
c_4	$y^{97} - 3y^{96} + \cdots - 282y - 1$
c_6	$y^{97} + 19y^{96} + \cdots - 63141732036y - 1713214881$
c_7	$y^{97} - 45y^{96} + \cdots + 204622080600y - 6458211769$
c_9, c_{12}	$y^{97} + 28y^{96} + \cdots + 6185y - 5929$
c_{10}	$y^{97} + 21y^{96} + \cdots - 93964y - 25$
c_{11}	$y^{97} - 53y^{96} + \cdots + 630230524010700897y - 53723406836308609$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.760246+0.714813I$ $a=-0.193608-0.566947I$ $b=-0.731753+0.243850I$	$-3.28969-1.97027I$	0
$u=-0.760246-0.714813I$ $a=-0.193608+0.566947I$ $b=-0.731753-0.243850I$	$-3.28969+1.97027I$	0
$u=-0.657532+0.609454I$ $a=\ \ 0.726346+0.262206I$ $b=\ \ 0.083124-0.807986I$	$0.47950+4.79117I$	0
$u=-0.657532-0.609454I$ $a=\ \ 0.726346-0.262206I$ $b=\ \ 0.083124+0.807986I$	$0.47950-4.79117I$	0
$u=\ \ 0.685034+0.878100I$ $a=-0.675640+0.593394I$ $b=-1.044380+0.432774I$	$-1.28499-4.64287I$	0
$u=\ \ 0.685034-0.878100I$ $a=-0.675640-0.593394I$ $b=-1.044380-0.432774I$	$-1.28499+4.64287I$	0
$u=\ \ 0.075161+1.114100I$ $a=\ \ 0.416477-1.110930I$ $b=\ \ 0.878909+0.357543I$	$-1.86695+1.01835I$	0
$u=\ \ 0.075161-1.114100I$ $a=\ \ 0.416477+1.110930I$ $b=\ \ 0.878909-0.357543I$	$-1.86695-1.01835I$	0
$u=\ \ 0.016883+0.882984I$ $a=-0.123207+0.633830I$ $b=-0.588620-0.214403I$	$2.45092-1.33246I$	0
$u=\ \ 0.016883-0.882984I$ $a=-0.123207-0.633830I$ $b=-0.588620+0.214403I$	$2.45092+1.33246I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.375100+1.079430I$ $a=-1.249720+0.232941I$ $b=-1.68979-0.00461I$	$4.32226+1.56783I$	0
$u=-0.375100-1.079430I$ $a=-1.249720-0.232941I$ $b=-1.68979+0.00461I$	$4.32226-1.56783I$	0
$u=-0.698909+0.927947I$ $a=0.674038+0.385290I$ $b=1.170460-0.394638I$	$-2.66934+7.52224I$	0
$u=-0.698909-0.927947I$ $a=0.674038-0.385290I$ $b=1.170460+0.394638I$	$-2.66934-7.52224I$	0
$u=-1.192060+0.013477I$ $a=-0.650672+0.794722I$ $b=-0.665573-0.387174I$	$3.36728+4.65708I$	0
$u=-1.192060-0.013477I$ $a=-0.650672-0.794722I$ $b=-0.665573+0.387174I$	$3.36728-4.65708I$	0
$u=-0.143111+1.228920I$ $a=-1.059730-0.651904I$ $b=-2.01954-0.49278I$	$5.83853+1.62863I$	0
$u=-0.143111-1.228920I$ $a=-1.059730+0.651904I$ $b=-2.01954+0.49278I$	$5.83853-1.62863I$	0
$u=1.048790+0.661651I$ $a=0.586415-0.071737I$ $b=0.564556-0.082756I$	$-3.62452-0.55595I$	0
$u=1.048790-0.661651I$ $a=0.586415+0.071737I$ $b=0.564556+0.082756I$	$-3.62452+0.55595I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.097511+0.747941I$ $a=\ \ 0.158274+0.682421I$ $b=-0.38468-1.36361I$	$3.46378+0.60519I$	0
$u=-0.097511-0.747941I$ $a=\ \ 0.158274-0.682421I$ $b=-0.38468+1.36361I$	$3.46378-0.60519I$	0
$u=\ \ 0.102907+1.241730I$ $a=-0.024011-0.962617I$ $b=\ \ 0.07257+1.49033I$	$0.02293+4.98958I$	0
$u=\ \ 0.102907-1.241730I$ $a=-0.024011+0.962617I$ $b=\ \ 0.07257-1.49033I$	$0.02293-4.98958I$	0
$u=-0.126641+1.242000I$ $a=-0.305893-1.351710I$ $b=-0.335000-0.398209I$	$-2.02501+5.36360I$	0
$u=-0.126641-1.242000I$ $a=-0.305893+1.351710I$ $b=-0.335000+0.398209I$	$-2.02501-5.36360I$	0
$u=\ \ 0.089842+1.252000I$ $a=\ \ 0.749715-0.687310I$ $b=\ \ 2.12267-0.29254I$	$5.04826+1.44747I$	0
$u=\ \ 0.089842-1.252000I$ $a=\ \ 0.749715+0.687310I$ $b=\ \ 2.12267+0.29254I$	$5.04826-1.44747I$	0
$u=\ \ 0.836827+0.976492I$ $a=-0.437313+0.429368I$ $b=-0.337845+0.111976I$	$-2.58166-6.15181I$	0
$u=\ \ 0.836827-0.976492I$ $a=-0.437313-0.429368I$ $b=-0.337845-0.111976I$	$-2.58166+6.15181I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.157774+1.281570I$ $a=-0.865184-0.313827I$ $b=-2.04324-0.43736I$	$6.05737-0.52590I$	0
$u=-0.157774-1.281570I$ $a=-0.865184+0.313827I$ $b=-2.04324+0.43736I$	$6.05737+0.52590I$	0
$u=-0.299586+1.281380I$ $a=-0.315544-0.112531I$ $b=-1.39447-0.51312I$	$2.64307-0.65871I$	0
$u=-0.299586-1.281380I$ $a=-0.315544+0.112531I$ $b=-1.39447+0.51312I$	$2.64307+0.65871I$	0
$u=0.088041+0.675207I$ $a=-0.462310+0.687813I$ $b=-0.20410+2.84623I$	$-2.00678-5.79597I$	0
$u=0.088041-0.675207I$ $a=-0.462310-0.687813I$ $b=-0.20410-2.84623I$	$-2.00678+5.79597I$	0
$u=0.109003+1.318850I$ $a=0.636753-0.514745I$ $b=2.19168-0.61999I$	$6.85780-0.45615I$	0
$u=0.109003-1.318850I$ $a=0.636753+0.514745I$ $b=2.19168+0.61999I$	$6.85780+0.45615I$	0
$u=-0.188162+1.317810I$ $a=-0.945038-0.633570I$ $b=-1.86013-0.84259I$	$5.61056+6.55817I$	0
$u=-0.188162-1.317810I$ $a=-0.945038+0.633570I$ $b=-1.86013+0.84259I$	$5.61056-6.55817I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.089708+0.659104I$ $a=\ \ 0.625499+0.526885I$ $b=-0.05591+1.92916I$	$-3.26210-0.88688I$	0
$u=-0.089708-0.659104I$ $a=\ \ 0.625499-0.526885I$ $b=-0.05591-1.92916I$	$-3.26210+0.88688I$	0
$u=\ \ 0.550225+0.370829I$ $a=\ \ 1.37374-0.59279I$ $b=\ \ 0.316027+0.051040I$	$-2.09843-0.04727I$	0
$u=\ \ 0.550225-0.370829I$ $a=\ \ 1.37374+0.59279I$ $b=\ \ 0.316027-0.051040I$	$-2.09843+0.04727I$	0
$u=-0.123707+1.336890I$ $a=-0.736641-0.859650I$ $b=-1.83600-0.87769I$	$3.96502+7.65593I$	0
$u=-0.123707-1.336890I$ $a=-0.736641+0.859650I$ $b=-1.83600+0.87769I$	$3.96502-7.65593I$	0
$u=\ \ 0.216477+1.329420I$ $a=-0.663961+0.600756I$ $b=-1.63036+0.66732I$	$2.91727-2.78839I$	0
$u=\ \ 0.216477-1.329420I$ $a=-0.663961-0.600756I$ $b=-1.63036-0.66732I$	$2.91727+2.78839I$	0
$u=\ \ 1.351690+0.149440I$ $a=-0.203956+0.310315I$ $b=\ \ 0.437082+0.252251I$	$-3.83697+0.72522I$	0
$u=\ \ 1.351690-0.149440I$ $a=-0.203956-0.310315I$ $b=\ \ 0.437082-0.252251I$	$-3.83697-0.72522I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.317800+0.362941I$		
$a=$	$0.632288-0.804333I$	$2.24710+1.96831I$	0
$b=$	$0.463138+0.501894I$		
$u=$	$1.317800-0.362941I$		
$a=$	$0.632288+0.804333I$	$2.24710-1.96831I$	0
$b=$	$0.463138-0.501894I$		
$u=$	$0.108809+1.380310I$		
$a=$	$0.548841-0.700707I$	$5.96593-5.15729I$	0
$b=$	$2.06110-0.88847I$		
$u=$	$0.108809-1.380310I$		
$a=$	$0.548841+0.700707I$	$5.96593+5.15729I$	0
$b=$	$2.06110+0.88847I$		
$u=$	$-0.058707+1.388820I$		
$a=$	$-0.174490-1.006260I$	$-1.80692+3.28415I$	0
$b=$	$-1.276610+0.366071I$		
$u=$	$-0.058707-1.388820I$		
$a=$	$-0.174490+1.006260I$	$-1.80692-3.28415I$	0
$b=$	$-1.276610-0.366071I$		
$u=$	$0.16810+1.40583I$		
$a=$	$0.675284-0.576755I$	$5.03173-7.86661I$	0
$b=$	$1.79582-1.02764I$		
$u=$	$0.16810-1.40583I$		
$a=$	$0.675284+0.576755I$	$5.03173+7.86661I$	0
$b=$	$1.79582+1.02764I$		
$u=$	$1.43444+0.26314I$		
$a=$	$0.472803-0.783305I$	$2.03664-3.97359I$	0
$b=$	$0.696186+0.471124I$		
$u=$	$1.43444-0.26314I$		
$a=$	$0.472803+0.783305I$	$2.03664+3.97359I$	0
$b=$	$0.696186-0.471124I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.45943+0.05125I$ $a=-0.685709-0.630236I$ $b=-0.523142+0.444804I$	$1.51054-10.86420I$	0
$u=-1.45943-0.05125I$ $a=-0.685709+0.630236I$ $b=-0.523142-0.444804I$	$1.51054+10.86420I$	0
$u=0.37364+1.41664I$ $a=0.729528-0.199140I$ $b=1.39487-0.69099I$	$1.08235-6.60829I$	0
$u=0.37364-1.41664I$ $a=0.729528+0.199140I$ $b=1.39487+0.69099I$	$1.08235+6.60829I$	0
$u=0.481355$ $a=0.991896$ $b=0.351898$	-0.805526	-12.2460
$u=-0.60146+1.40743I$ $a=0.794250+0.408001I$ $b=2.24049+0.20916I$	$7.73228+10.97210I$	0
$u=-0.60146-1.40743I$ $a=0.794250-0.408001I$ $b=2.24049-0.20916I$	$7.73228-10.97210I$	0
$u=-0.149531+0.376901I$ $a=1.41146+2.93327I$ $b=-0.32258+1.89399I$	$-5.17781-4.19929I$	$-10.90113-0.12456I$
$u=-0.149531-0.376901I$ $a=1.41146-2.93327I$ $b=-0.32258-1.89399I$	$-5.17781+4.19929I$	$-10.90113+0.12456I$
$u=0.25147+1.57784I$ $a=0.141603-0.298107I$ $b=0.91858-1.23999I$	$3.03072-4.98323I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.25147 - 1.57784I$ $a = 0.141603 + 0.298107I$ $b = 0.91858 + 1.23999I$	$3.03072 + 4.98323I$	0
$u = -1.59759 + 0.06972I$ $a = 0.996380 - 0.009892I$ $b = 2.54720 - 0.22324I$	$-9.03979 + 1.64363I$	0
$u = -1.59759 - 0.06972I$ $a = 0.996380 + 0.009892I$ $b = 2.54720 + 0.22324I$	$-9.03979 - 1.64363I$	0
$u = 0.45623 + 1.54965I$ $a = 0.661263 + 0.625703I$ $b = 1.65682 + 0.34057I$	$8.12848 - 10.41620I$	0
$u = 0.45623 - 1.54965I$ $a = 0.661263 - 0.625703I$ $b = 1.65682 - 0.34057I$	$8.12848 + 10.41620I$	0
$u = 0.44230 + 1.55441I$ $a = 0.452586 + 0.665908I$ $b = 1.278380 + 0.551581I$	$8.44819 - 4.12298I$	0
$u = 0.44230 - 1.55441I$ $a = 0.452586 - 0.665908I$ $b = 1.278380 - 0.551581I$	$8.44819 + 4.12298I$	0
$u = -0.65013 + 1.49886I$ $a = 0.807460 + 0.488365I$ $b = 2.23633 + 0.59408I$	$6.1711 + 18.1798I$	0
$u = -0.65013 - 1.49886I$ $a = 0.807460 - 0.488365I$ $b = 2.23633 - 0.59408I$	$6.1711 - 18.1798I$	0
$u = 0.63068 + 1.52308I$ $a = -0.758391 + 0.398026I$ $b = -2.11817 + 0.16340I$	$6.47295 - 3.67765I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.63068 - 1.52308I$ $a = -0.758391 - 0.398026I$ $b = -2.11817 - 0.16340I$	$6.47295 + 3.67765I$	0
$u = -0.58827 + 1.56024I$ $a = -0.589315 + 0.627708I$ $b = -1.53199 + 0.30757I$	$8.03425 + 2.10481I$	0
$u = -0.58827 - 1.56024I$ $a = -0.589315 - 0.627708I$ $b = -1.53199 - 0.30757I$	$8.03425 - 2.10481I$	0
$u = \quad 0.123709 + 0.284274I$ $a = -2.26677 + 3.33699I$ $b = \quad 0.77717 + 1.53806I$	$-6.10708 - 3.53516I$	$-12.00476 + 5.28845I$
$u = \quad 0.123709 - 0.284274I$ $a = -2.26677 - 3.33699I$ $b = \quad 0.77717 - 1.53806I$	$-6.10708 + 3.53516I$	$-12.00476 - 5.28845I$
$u = \quad 0.75356 + 1.51288I$ $a = -0.804619 + 0.453639I$ $b = -2.25818 + 0.49879I$	$5.86495 - 9.79910I$	0
$u = \quad 0.75356 - 1.51288I$ $a = -0.804619 - 0.453639I$ $b = -2.25818 - 0.49879I$	$5.86495 + 9.79910I$	0
$u = -0.47940 + 1.70250I$ $a = -0.440330 + 0.580484I$ $b = -1.267280 + 0.393537I$	$7.42104 - 3.34840I$	0
$u = -0.47940 - 1.70250I$ $a = -0.440330 - 0.580484I$ $b = -1.267280 - 0.393537I$	$7.42104 + 3.34840I$	0
$u = -0.189640 + 0.098009I$ $a = \quad 0.70925 + 3.85367I$ $b = -0.292277 + 0.223053I$	$2.57773 - 0.05512I$	$-1.71589 - 0.40383I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.189640-0.098009I$ $a=\ \ 0.70925-3.85367I$ $b=-0.292277-0.223053I$	$2.57773+0.05512I$	$-1.71589+0.40383I$
$u=-0.116702+0.159119I$ $a=\ \ 3.84124-0.50147I$ $b=-0.221670+0.249623I$	$1.82024-1.89670I$	$1.201931-0.229574I$
$u=-0.116702-0.159119I$ $a=\ \ 3.84124+0.50147I$ $b=-0.221670-0.249623I$	$1.82024+1.89670I$	$1.201931+0.229574I$
$u=-0.154022+0.032161I$ $a=\ \ 6.83770-2.10703I$ $b=-0.496860-0.127523I$	$1.16653+4.65668I$	$-2.43280-9.33729I$
$u=-0.154022-0.032161I$ $a=\ \ 6.83770+2.10703I$ $b=-0.496860+0.127523I$	$1.16653-4.65668I$	$-2.43280+9.33729I$
$u=-0.0173862+0.1024220I$ $a=-3.52308+11.48830I$ $b=\ \ 0.051053+0.372396I$	$-0.34740-6.68586I$	$-6.46362-2.73245I$
$u=-0.0173862-0.1024220I$ $a=-3.52308-11.48830I$ $b=\ \ 0.051053-0.372396I$	$-0.34740+6.68586I$	$-6.46362+2.73245I$

II.

$\boldsymbol{I_2^u = \langle 2.13\times 10^{23}u^{33}+3.36\times 10^{23}u^{32}+\cdots+5.16\times 10^{22}b-2.20\times 10^{23},\ 6.93\times 10^{22}u^{33}+2.64\times 10^{22}u^{32}+\cdots+5.16\times 10^{22}a+3.18\times 10^{22},\ u^{34}+2u^{33}+\cdots+2u+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.34393u^{33} - 0.512395u^{32} + \cdots - 12.4573u - 0.616527 \\ -4.13790u^{33} - 6.52236u^{32} + \cdots - 0.400759u + 4.26116 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1.34393u^{33} - 0.512395u^{32} + \cdots - 12.4573u - 0.616527 \\ -4.66688u^{33} - 8.94143u^{32} + \cdots - 3.40774u + 2.08571 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3.91322u^{33} + 5.67476u^{32} + \cdots + 10.3439u - 1.01049 \\ 3.38080u^{33} + 4.03573u^{32} + \cdots - 3.23725u - 4.68318 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.998123u^{33} - 3.76851u^{32} + \cdots - 13.0608u - 7.33368 \\ -3.14023u^{33} - 7.14148u^{32} + \cdots + 2.06851u - 1.35532 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.183404u^{33} + 3.57104u^{32} + \cdots + 17.6908u + 8.83398 \\ 1.35293u^{33} + 3.09393u^{32} + \cdots + 7.26986u + 1.08995 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1.16953u^{33} + 0.477111u^{32} + \cdots + 10.4209u + 7.74403 \\ 1.35293u^{33} + 3.09393u^{32} + \cdots + 7.26986u + 1.08995 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.479451u^{33} + 0.899880u^{32} + \cdots + 0.218271u + 1.65100 \\ -0.737763u^{33} + 0.147169u^{32} + \cdots + 3.72740u + 4.35441 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -4.25646u^{33} - 8.99857u^{32} + \cdots - 9.55558u - 4.30653 \\ -4.51901u^{33} - 10.9433u^{32} + \cdots - 9.72835u - 4.50904 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{10171844171322361603537 01}{5155748324575074114353 5}u^{33} - \frac{99578701834313772326311 9}{5155748324575074114353 5}u^{32} + \cdots + \frac{35711122690677413818301 7}{1031149664915014822870 7}u + \frac{13757571023454379268911 28}{5155748324575074114353 5}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{34} - 2u^{33} + \cdots - 154u + 121$
c_2	$u^{34} - 2u^{33} + \cdots - 2u + 1$
c_3	$u^{34} - 12u^{32} + \cdots - 5u + 3$
c_4	$u^{34} - 8u^{33} + \cdots + 6u + 1$
c_5	$u^{34} + 2u^{33} + \cdots + 2u + 1$
c_6	$u^{34} - 4u^{32} + \cdots + 2u + 3$
c_7	$u^{34} + 2u^{33} + \cdots - 4u + 1$
c_8	$u^{34} - 12u^{32} + \cdots + 5u + 3$
c_9	$u^{34} + 11u^{33} + \cdots + 9u + 1$
c_{10}	$u^{34} - u^{32} + \cdots - 4u + 1$
c_{11}	$u^{34} - 4u^{32} + \cdots + 129u + 23$
c_{12}	$u^{34} - 11u^{33} + \cdots - 9u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{34} - 20y^{33} + \cdots + 272976y + 14641$
c_2, c_5	$y^{34} + 16y^{33} + \cdots + 20y + 1$
c_3, c_8	$y^{34} - 24y^{33} + \cdots - 223y + 9$
c_4	$y^{34} - 10y^{33} + \cdots - 2y + 1$
c_6	$y^{34} - 8y^{33} + \cdots + 92y + 9$
c_7	$y^{34} - 12y^{33} + \cdots + 4y + 1$
c_9, c_{12}	$y^{34} + 13y^{33} + \cdots + 19y + 1$
c_{10}	$y^{34} - 2y^{33} + \cdots + 12y + 1$
c_{11}	$y^{34} - 8y^{33} + \cdots + 379y + 529$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.756254+0.498379I$ $a=\ 0.291993+1.006350I$ $b=\ 0.547484-0.448937I$	$1.12596+2.79841I$	$-3.88515-3.26716I$
$u=-0.756254-0.498379I$ $a=\ 0.291993-1.006350I$ $b=\ 0.547484+0.448937I$	$1.12596-2.79841I$	$-3.88515+3.26716I$
$u=-0.435989+0.782744I$ $a=\ 0.153748+1.367160I$ $b=\ 0.071902-0.634116I$	$1.43402-3.72700I$	$-0.10651+2.32700I$
$u=-0.435989-0.782744I$ $a=\ 0.153748-1.367160I$ $b=\ 0.071902+0.634116I$	$1.43402+3.72700I$	$-0.10651-2.32700I$
$u=\ 0.430071+0.772069I$ $a=\ 0.490062-1.279420I$ $b=\ 0.12190-1.45417I$	$-5.92140+2.34582I$	$-9.49668+0.89111I$
$u=\ 0.430071-0.772069I$ $a=\ 0.490062+1.279420I$ $b=\ 0.12190+1.45417I$	$-5.92140-2.34582I$	$-9.49668-0.89111I$
$u=\ 0.328746+1.096600I$ $a=-1.219510+0.014615I$ $b=-1.66375+0.10378I$	$4.50794-1.26644I$	$1.69285-7.49476I$
$u=\ 0.328746-1.096600I$ $a=-1.219510-0.014615I$ $b=-1.66375-0.10378I$	$4.50794+1.26644I$	$1.69285+7.49476I$
$u=\ 0.552443+1.078510I$ $a=-0.499404+0.919217I$ $b=-0.410464-0.132230I$	$-4.62883-6.29570I$	$-10.32076+6.33356I$
$u=\ 0.552443-1.078510I$ $a=-0.499404-0.919217I$ $b=-0.410464+0.132230I$	$-4.62883+6.29570I$	$-10.32076-6.33356I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.099135+0.767388I$ $a=-0.265030+0.753392I$ $b=-0.023014-1.044870I$	$3.71465+0.14717I$	$7.02104+1.33544I$
$u=-0.099135-0.767388I$ $a=-0.265030-0.753392I$ $b=-0.023014+1.044870I$	$3.71465-0.14717I$	$7.02104-1.33544I$
$u=-1.226020+0.269619I$ $a=-0.443645+0.087491I$ $b=\ \ 0.164775+0.297876I$	$-4.20431-0.12746I$	$-15.3819+0.1803I$
$u=-1.226020-0.269619I$ $a=-0.443645-0.087491I$ $b=\ \ 0.164775-0.297876I$	$-4.20431+0.12746I$	$-15.3819-0.1803I$
$u=-0.100624+1.290350I$ $a=-0.798065-0.469448I$ $b=-2.03678-0.49472I$	$5.75508+0.15243I$	$-0.56414-1.40213I$
$u=-0.100624-1.290350I$ $a=-0.798065+0.469448I$ $b=-2.03678+0.49472I$	$5.75508-0.15243I$	$-0.56414+1.40213I$
$u=-0.777021+1.045600I$ $a=\ \ 0.358329+0.379160I$ $b=\ \ 0.768082+0.041829I$	$-2.15598+6.45215I$	$-1.52529-11.10251I$
$u=-0.777021-1.045600I$ $a=\ \ 0.358329-0.379160I$ $b=\ \ 0.768082-0.041829I$	$-2.15598-6.45215I$	$-1.52529+11.10251I$
$u=-0.243737+0.629296I$ $a=-0.70546-1.85688I$ $b=-0.09948-1.92864I$	$-4.95310+4.84356I$	$-6.69974-10.40063I$
$u=-0.243737-0.629296I$ $a=-0.70546+1.85688I$ $b=-0.09948+1.92864I$	$-4.95310-4.84356I$	$-6.69974+10.40063I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.474951+0.461413I$ $a=-1.091470-0.544459I$ $b=-0.50922+1.38394I$	$-4.17076-0.66154I$	$-12.42216-0.57501I$
$u=-0.474951-0.461413I$ $a=-1.091470+0.544459I$ $b=-0.50922-1.38394I$	$-4.17076+0.66154I$	$-12.42216+0.57501I$
$u=-0.185881+1.371650I$ $a=-0.768578-0.655345I$ $b=-1.86428-0.88713I$	$4.74101+6.82710I$	$-2.34073-5.29286I$
$u=-0.185881-1.371650I$ $a=-0.768578+0.655345I$ $b=-1.86428+0.88713I$	$4.74101-6.82710I$	$-2.34073+5.29286I$
$u=0.045359+1.399920I$ $a=-0.104107+1.061460I$ $b=-0.706910-0.416082I$	$-1.41812-3.68945I$	$-2.55139+6.84171I$
$u=0.045359-1.399920I$ $a=-0.104107-1.061460I$ $b=-0.706910+0.416082I$	$-1.41812+3.68945I$	$-2.55139-6.84171I$
$u=0.319867+0.495451I$ $a=-1.73662+1.07718I$ $b=-0.364716-0.041620I$	$-0.21942-7.07391I$	$-0.1459+15.9069I$
$u=0.319867-0.495451I$ $a=-1.73662-1.07718I$ $b=-0.364716+0.041620I$	$-0.21942+7.07391I$	$-0.1459-15.9069I$
$u=0.218399+0.418657I$ $a=1.05429-1.31503I$ $b=-0.10144+2.64886I$	$-2.58059-5.79109I$	$-13.0954+6.4835I$
$u=0.218399-0.418657I$ $a=1.05429+1.31503I$ $b=-0.10144-2.64886I$	$-2.58059+5.79109I$	$-13.0954-6.4835I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.20178+1.57049I$ $a=\quad 0.291877+0.331691I$ $b=\quad 1.08382+1.26487I$	$3.19469+5.35634I$	0
$u=-0.20178-1.57049I$ $a=\quad 0.291877-0.331691I$ $b=\quad 1.08382-1.26487I$	$3.19469-5.35634I$	0
$u=\quad 1.60652+0.01615I$ $a=\quad 0.991589+0.027995I$ $b=\quad 2.52208+0.24319I$	$-9.02524-1.72239I$	$0.+49.9380I$
$u=\quad 1.60652-0.01615I$ $a=\quad 0.991589-0.027995I$ $b=\quad 2.52208-0.24319I$	$-9.02524+1.72239I$	$0.-49.9380I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{34}-2u^{33}+\cdots-154u+121)$ $\cdot(u^{97}-11u^{96}+\cdots-374950992u+77123381)$
c_2	$(u^{34}-2u^{33}+\cdots-2u+1)(u^{97}+u^{96}+\cdots-26u+1)$
c_3	$(u^{34}-12u^{32}+\cdots-5u+3)(u^{97}-u^{96}+\cdots-1679u+193)$
c_4	$(u^{34}-8u^{33}+\cdots+6u+1)(u^{97}-5u^{96}+\cdots+2u+1)$
c_5	$(u^{34}+2u^{33}+\cdots+2u+1)(u^{97}+u^{96}+\cdots-26u+1)$
c_6	$(u^{34}-4u^{32}+\cdots+2u+3)(u^{97}+u^{96}+\cdots-51516u+41391)$
c_7	$(u^{34}+2u^{33}+\cdots-4u+1)(u^{97}+5u^{96}+\cdots-340064u+80363)$
c_8	$(u^{34}-12u^{32}+\cdots+5u+3)(u^{97}-u^{96}+\cdots-1679u+193)$
c_9	$(u^{34}+11u^{33}+\cdots+9u+1)(u^{97}-6u^{96}+\cdots+369u+77)$
c_{10}	$(u^{34}-u^{32}+\cdots-4u+1)(u^{97}-u^{96}+\cdots-334u+5)$
c_{11}	$(u^{34}-4u^{32}+\cdots+129u+23)$ $\cdot(u^{97}-3u^{96}+\cdots+1176280393u+231783103)$
c_{12}	$(u^{34}-11u^{33}+\cdots-9u+1)(u^{97}-6u^{96}+\cdots+369u+77)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{34} - 20y^{33} + \cdots + 272976y + 14641)$ $\cdot (y^{97} + 19y^{96} + \cdots - 3962961873565244y - 5948015896871161)$
c_2, c_5	$(y^{34} + 16y^{33} + \cdots + 20y + 1)(y^{97} + 71y^{96} + \cdots - 140y - 1)$
c_3, c_8	$(y^{34} - 24y^{33} + \cdots - 223y + 9)$ $\cdot (y^{97} - 33y^{96} + \cdots + 1583455y - 37249)$
c_4	$(y^{34} - 10y^{33} + \cdots - 2y + 1)(y^{97} - 3y^{96} + \cdots - 282y - 1)$
c_6	$(y^{34} - 8y^{33} + \cdots + 92y + 9)$ $\cdot (y^{97} + 19y^{96} + \cdots - 63141732036y - 1713214881)$
c_7	$(y^{34} - 12y^{33} + \cdots + 4y + 1)$ $\cdot (y^{97} - 45y^{96} + \cdots + 204622080600y - 6458211769)$
c_9, c_{12}	$(y^{34} + 13y^{33} + \cdots + 19y + 1)(y^{97} + 28y^{96} + \cdots + 6185y - 5929)$
c_{10}	$(y^{34} - 2y^{33} + \cdots + 12y + 1)(y^{97} + 21y^{96} + \cdots - 93964y - 25)$
c_{11}	$(y^{34} - 8y^{33} + \cdots + 379y + 529)$ $\cdot (y^{97} - 53y^{96} + \cdots + 630230524010700897y - 53723406836308609)$