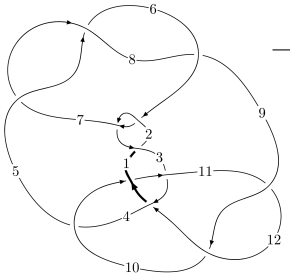
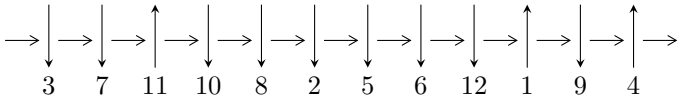
$12a_{0675}$ $(K12a_{0675})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 8.64413 \times 10^{873} u^{111} - 4.69059 \times 10^{874} u^{110} + \cdots + 2.10211 \times 10^{875} b + 3.17682 \times 10^{876}, \\ & 2.94142 \times 10^{875} u^{111} - 1.73846 \times 10^{876} u^{110} + \cdots + 3.38440 \times 10^{877} a + 5.18415 \times 10^{878}, \\ & u^{112} - 5u^{111} + \cdots - 32u + 161 \rangle \\ I_2^u = \langle & b,\ u^5 + 2u^4 - u^3 - 3u^2 + a + 2,\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle \\ I_3^u = \langle & b + u + 2,\ a - 1,\ u^2 + 3u + 1 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 120 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. $\boldsymbol{I_1^u = \langle 8.64 \times 10^{873} u^{111} - 4.69 \times 10^{874} u^{110} + \cdots + 2.10 \times 10^{875} b + 3.18 \times 10^{876},\ 2.94 \times 10^{875} u^{111} - 1.74 \times 10^{876} u^{110} + \cdots + 3.38 \times 10^{877} a + 5.18 \times 10^{878},\ u^{112} - 5u^{111} + \cdots - 32u + 161 \rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -0.00869112u^{111} + 0.0513670u^{110} + \cdots - 22.1084u - 15.3178 \\ -0.0411212u^{111} + 0.223137u^{110} + \cdots + 49.0131u - 15.1125 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.0417015u^{111} - 0.223931u^{110} + \cdots - 1.70906u + 19.4928 \\ -0.0475784u^{111} + 0.258130u^{110} + \cdots + 41.4609u - 18.2032 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.00587685u^{111} + 0.0341992u^{110} + \cdots + 39.7519u + 1.28959 \\ -0.0475784u^{111} + 0.258130u^{110} + \cdots + 41.4609u - 18.2032 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.0777167u^{111} + 0.428161u^{110} + \cdots + 64.6212u - 43.6433 \\ 0.0560739u^{111} - 0.303666u^{110} + \cdots - 49.2634u + 20.8838 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0139652u^{111} + 0.0715977u^{110} + \cdots + 10.2906u + 6.50129 \\ 0.0156815u^{111} - 0.0832120u^{110} + \cdots - 16.6168u + 3.89101 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00952388u^{111} - 0.0439959u^{110} + \cdots + 1.32330u - 3.32008 \\ 0.000290774u^{111} - 0.00392329u^{110} + \cdots + 0.729889u + 1.77651 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0324993u^{111} - 0.172787u^{110} + \cdots - 30.0523u + 8.35382 \\ -0.0466259u^{111} + 0.252618u^{110} + \cdots + 49.2139u - 17.8341 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.0424410u^{111} - 0.227744u^{110} + \cdots - 2.80931u + 20.2680 \\ -0.0567134u^{111} + 0.307789u^{110} + \cdots + 49.8914u - 21.4801 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.0353301u^{111} - 0.195586u^{110} + \cdots - 74.1382u + 16.7074 \\ -0.0486125u^{111} + 0.264384u^{110} + \cdots + 48.8205u - 20.2064 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.30472u^{111} - 7.06537u^{110} + \cdots - 1339.89u + 498.199$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{112} + 42u^{111} + \cdots + 36864u + 4096$
c_2, c_6	$u^{112} - 2u^{111} + \cdots + 192u + 64$
c_3	$u^{112} - 5u^{111} + \cdots - 32u + 161$
c_4	$u^{112} - 9u^{111} + \cdots + 2324u - 121$
c_5, c_7, c_8	$u^{112} - 8u^{111} + \cdots - 7u + 1$
c_9, c_{11}	$u^{112} - 4u^{111} + \cdots - 35u + 1$
c_{10}	$u^{112} + 18u^{111} + \cdots - 48u + 4$
c_{12}	$u^{112} + 9u^{111} + \cdots + 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{112} + 46y^{111} + \cdots + 1719664640y + 16777216$
c_2, c_6	$y^{112} - 42y^{111} + \cdots - 36864y + 4096$
c_3	$y^{112} - 109y^{111} + \cdots - 254760y + 25921$
c_4	$y^{112} - 109y^{111} + \cdots - 1162588y + 14641$
c_5, c_7, c_8	$y^{112} - 96y^{111} + \cdots + 115y + 1$
c_9, c_{11}	$y^{112} - 68y^{111} + \cdots - 815y + 1$
c_{10}	$y^{112} - 18y^{111} + \cdots - 1464y + 16$
c_{12}	$y^{112} + 11y^{111} + \cdots - 8y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.468045+0.892905I$ $a=-0.13957-1.52043I$ $b=\ \ 1.212340+0.047993I$	$-10.99840-2.00997I$	0
$u=-0.468045-0.892905I$ $a=-0.13957+1.52043I$ $b=\ \ 1.212340-0.047993I$	$-10.99840+2.00997I$	0
$u=\ \ 1.026540+0.095270I$ $a=\ \ 0.531056+0.969905I$ $b=-0.541459-0.797677I$	$3.07753+0.68921I$	0
$u=\ \ 1.026540-0.095270I$ $a=\ \ 0.531056-0.969905I$ $b=-0.541459+0.797677I$	$3.07753-0.68921I$	0
$u=\ \ 0.474652+0.832338I$ $a=\ \ 0.501877-0.671501I$ $b=\ \ 1.149220+0.205342I$	$-4.72741+2.38013I$	0
$u=\ \ 0.474652-0.832338I$ $a=\ \ 0.501877+0.671501I$ $b=\ \ 1.149220-0.205342I$	$-4.72741-2.38013I$	0
$u=-0.986400+0.352157I$ $a=-0.06333+1.49320I$ $b=-1.095380-0.664874I$	$1.39228-6.23151I$	0
$u=-0.986400-0.352157I$ $a=-0.06333-1.49320I$ $b=-1.095380+0.664874I$	$1.39228+6.23151I$	0
$u=-0.439969+0.844782I$ $a=\ \ 0.750760+0.662615I$ $b=\ \ 0.168122-0.261520I$	$-1.92777+0.81004I$	0
$u=-0.439969-0.844782I$ $a=\ \ 0.750760-0.662615I$ $b=\ \ 0.168122+0.261520I$	$-1.92777-0.81004I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.900349 + 0.307525I$ $a = -0.58166 - 1.29875I$ $b = 0.564295 + 1.113070I$	$-1.81857 + 4.04926I$	0
$u = 0.900349 - 0.307525I$ $a = -0.58166 + 1.29875I$ $b = 0.564295 - 1.113070I$	$-1.81857 - 4.04926I$	0
$u = 0.305901 + 0.888362I$ $a = 0.236205 + 1.086070I$ $b = 1.045770 - 0.734544I$	$-1.43150 + 7.30797I$	0
$u = 0.305901 - 0.888362I$ $a = 0.236205 - 1.086070I$ $b = 1.045770 + 0.734544I$	$-1.43150 - 7.30797I$	0
$u = 0.866434 + 0.319209I$ $a = 0.281117 + 0.511404I$ $b = -0.085748 - 0.495139I$	$1.46476 + 1.15131I$	0
$u = 0.866434 - 0.319209I$ $a = 0.281117 - 0.511404I$ $b = -0.085748 + 0.495139I$	$1.46476 - 1.15131I$	0
$u = 0.113281 + 1.084940I$ $a = -1.16785 - 1.00702I$ $b = -0.351973 + 0.831284I$	$-5.29466 - 0.57195I$	0
$u = 0.113281 - 1.084940I$ $a = -1.16785 + 1.00702I$ $b = -0.351973 - 0.831284I$	$-5.29466 + 0.57195I$	0
$u = -0.088142 + 0.899059I$ $a = -1.61631 + 1.18838I$ $b = -0.757971 + 0.094539I$	$-4.28499 - 1.36074I$	0
$u = -0.088142 - 0.899059I$ $a = -1.61631 - 1.18838I$ $b = -0.757971 - 0.094539I$	$-4.28499 + 1.36074I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.566275+0.948690I$ $a=\ \ 0.209851+1.205160I$ $b=-0.070911-1.168160I$	$-6.89574-4.83025I$	0
$u=-0.566275-0.948690I$ $a=\ \ 0.209851-1.205160I$ $b=-0.070911+1.168160I$	$-6.89574+4.83025I$	0
$u=\ \ 0.105634+0.883669I$ $a=\ \ 0.142577+0.894261I$ $b=-1.38242-0.36899I$	$-11.58490-0.78846I$	0
$u=\ \ 0.105634-0.883669I$ $a=\ \ 0.142577-0.894261I$ $b=-1.38242+0.36899I$	$-11.58490+0.78846I$	0
$u=-0.861494+0.198796I$ $a=\ \ 0.369814-1.123050I$ $b=\ \ 1.052340+0.440204I$	$-0.97322-1.18405I$	0
$u=-0.861494-0.198796I$ $a=\ \ 0.369814+1.123050I$ $b=\ \ 1.052340-0.440204I$	$-0.97322+1.18405I$	0
$u=-0.911716+0.662167I$ $a=-0.114233-0.615496I$ $b=\ \ 0.029697+0.635113I$	$-0.90850-5.42294I$	0
$u=-0.911716-0.662167I$ $a=-0.114233+0.615496I$ $b=\ \ 0.029697-0.635113I$	$-0.90850+5.42294I$	0
$u=-0.390502+0.770194I$ $a=\ \ 1.182600-0.418464I$ $b=\ \ 1.178770+0.169202I$	$-7.09262-4.86963I$	0
$u=-0.390502-0.770194I$ $a=\ \ 1.182600+0.418464I$ $b=\ \ 1.178770-0.169202I$	$-7.09262+4.86963I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.855537+0.095153I$ $a=-0.736687+0.424172I$ $b=\ \ 0.824062-0.686417I$	$-0.18525+6.98643I$	0
$u=-0.855537-0.095153I$ $a=-0.736687-0.424172I$ $b=\ \ 0.824062+0.686417I$	$-0.18525-6.98643I$	0
$u=-1.036730+0.484104I$ $a=-0.15871-1.57266I$ $b=\ \ 1.180290+0.770211I$	$-3.79919-10.78570I$	0
$u=-1.036730-0.484104I$ $a=-0.15871+1.57266I$ $b=\ \ 1.180290-0.770211I$	$-3.79919+10.78570I$	0
$u=-0.878136+0.769471I$ $a=-1.03073+1.75744I$ $b=-0.854510-0.585436I$	$0.97833-3.36110I$	0
$u=-0.878136-0.769471I$ $a=-1.03073-1.75744I$ $b=-0.854510+0.585436I$	$0.97833+3.36110I$	0
$u=-0.705292+0.964759I$ $a=-0.134401+0.171016I$ $b=-1.104990+0.102541I$	$-6.88250+0.95679I$	0
$u=-0.705292-0.964759I$ $a=-0.134401-0.171016I$ $b=-1.104990-0.102541I$	$-6.88250-0.95679I$	0
$u=-0.102997+1.191740I$ $a=\ \ 0.718781+0.113606I$ $b=\ \ 0.872881-0.545073I$	$-2.51350+2.16509I$	0
$u=-0.102997-1.191740I$ $a=\ \ 0.718781-0.113606I$ $b=\ \ 0.872881+0.545073I$	$-2.51350-2.16509I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.853382 + 0.851081I$ $a = 0.666579 + 0.635943I$ $b = -0.618439 - 0.951660I$	$0.51258 + 6.03565I$	0
$u = 0.853382 - 0.851081I$ $a = 0.666579 - 0.635943I$ $b = -0.618439 + 0.951660I$	$0.51258 - 6.03565I$	0
$u = 0.698002 + 0.997090I$ $a = -0.616237 - 0.033041I$ $b = -1.124740 + 0.060024I$	$-5.03852 + 7.34388I$	0
$u = 0.698002 - 0.997090I$ $a = -0.616237 + 0.033041I$ $b = -1.124740 - 0.060024I$	$-5.03852 - 7.34388I$	0
$u = -0.584208 + 0.484004I$ $a = -1.85886 + 0.99076I$ $b = -0.852044 - 0.127697I$	$-0.94679 - 3.25376I$	0
$u = -0.584208 - 0.484004I$ $a = -1.85886 - 0.99076I$ $b = -0.852044 + 0.127697I$	$-0.94679 + 3.25376I$	0
$u = 0.993124 + 0.771280I$ $a = -0.761129 - 0.522135I$ $b = 0.705432 + 0.773381I$	$4.67418 + 2.34341I$	0
$u = 0.993124 - 0.771280I$ $a = -0.761129 + 0.522135I$ $b = 0.705432 - 0.773381I$	$4.67418 - 2.34341I$	0
$u = 1.255610 + 0.094001I$ $a = -0.781393 + 0.562496I$ $b = 0.784331 - 0.418208I$	$-0.04609 + 2.27832I$	0
$u = 1.255610 - 0.094001I$ $a = -0.781393 - 0.562496I$ $b = 0.784331 + 0.418208I$	$-0.04609 - 2.27832I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.891203+0.911299I$ $a=\ \ 0.67375-1.67146I$ $b=\ \ 0.985762+0.695082I$	$3.81295-7.90390I$	0
$u=-0.891203-0.911299I$ $a=\ \ 0.67375+1.67146I$ $b=\ \ 0.985762-0.695082I$	$3.81295+7.90390I$	0
$u=\ \ 0.278553+0.649349I$ $a=-0.543784-1.113530I$ $b=-0.927060+0.744372I$	$3.10964+3.02719I$	0
$u=\ \ 0.278553-0.649349I$ $a=-0.543784+1.113530I$ $b=-0.927060-0.744372I$	$3.10964-3.02719I$	0
$u=-0.197409+1.284420I$ $a=-0.223939-0.085915I$ $b=-1.094380+0.606228I$	$-7.43290+5.78346I$	0
$u=-0.197409-1.284420I$ $a=-0.223939+0.085915I$ $b=-1.094380-0.606228I$	$-7.43290-5.78346I$	0
$u=-0.590165+0.343631I$ $a=\ \ 1.47450+2.91661I$ $b=-1.107300-0.670157I$	$-6.26355-9.78611I$	0
$u=-0.590165-0.343631I$ $a=\ \ 1.47450-2.91661I$ $b=-1.107300+0.670157I$	$-6.26355+9.78611I$	0
$u=-0.869024+1.011960I$ $a=-0.47159+1.56244I$ $b=-1.098070-0.735726I$	$-1.00529-12.22180I$	0
$u=-0.869024-1.011960I$ $a=-0.47159-1.56244I$ $b=-1.098070+0.735726I$	$-1.00529+12.22180I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.588740+0.308270I$ $a=\ 1.42258-0.40347I$ $b=\ 0.730002-0.053014I$	$-1.135370+0.042892I$	0
$u=-0.588740-0.308270I$ $a=\ 1.42258+0.40347I$ $b=\ 0.730002+0.053014I$	$-1.135370-0.042892I$	0
$u=\ 0.560265+0.316560I$ $a=-1.042770-0.669832I$ $b=\ 0.004601+0.787819I$	$-2.72849+1.53038I$	0
$u=\ 0.560265-0.316560I$ $a=-1.042770+0.669832I$ $b=\ 0.004601-0.787819I$	$-2.72849-1.53038I$	0
$u=\ 1.165230+0.702845I$ $a=\ 0.891880+0.374546I$ $b=-0.857228-0.576973I$	$0.97470-1.25354I$	0
$u=\ 1.165230-0.702845I$ $a=\ 0.891880-0.374546I$ $b=-0.857228+0.576973I$	$0.97470+1.25354I$	0
$u=-0.110576+0.543663I$ $a=\ 0.300944+0.690223I$ $b=\ 0.712854-0.837133I$	$-0.359065-1.357260I$	$-4.82662+0.I$
$u=-0.110576-0.543663I$ $a=\ 0.300944-0.690223I$ $b=\ 0.712854+0.837133I$	$-0.359065+1.357260I$	$-4.82662+0.I$
$u=\ 0.349469+0.426717I$ $a=\ 2.77883+2.17565I$ $b=-0.497376-0.903947I$	$-4.39307+4.01879I$	$-13.0394-6.3418I$
$u=\ 0.349469-0.426717I$ $a=\ 2.77883-2.17565I$ $b=-0.497376+0.903947I$	$-4.39307-4.01879I$	$-13.0394+6.3418I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.492698+0.239422I$ $a=\ \ 0.549744-0.276436I$ $b=-0.800248+0.836455I$	$3.50998+2.86593I$	$-0.44864-5.27046I$
$u=-0.492698-0.239422I$ $a=\ \ 0.549744+0.276436I$ $b=-0.800248-0.836455I$	$3.50998-2.86593I$	$-0.44864+5.27046I$
$u=-0.429062+0.334358I$ $a=-1.24655-3.63053I$ $b=\ \ 0.948423+0.616190I$	$-1.33438-5.79082I$	$-9.77157+8.99738I$
$u=-0.429062-0.334358I$ $a=-1.24655+3.63053I$ $b=\ \ 0.948423-0.616190I$	$-1.33438+5.79082I$	$-9.77157-8.99738I$
$u=-0.160167+0.470619I$ $a=-0.97937+4.21410I$ $b=-0.729051-0.393657I$	$-3.76699-1.68644I$	$-14.6816+6.6415I$
$u=-0.160167-0.470619I$ $a=-0.97937-4.21410I$ $b=-0.729051+0.393657I$	$-3.76699+1.68644I$	$-14.6816-6.6415I$
$u=\ \ 0.75840+1.30183I$ $a=\ \ 0.020758+0.437342I$ $b=\ \ 1.353180-0.264117I$	$-12.2107+9.8962I$	0
$u=\ \ 0.75840-1.30183I$ $a=\ \ 0.020758-0.437342I$ $b=\ \ 1.353180+0.264117I$	$-12.2107-9.8962I$	0
$u=-1.31955+0.74333I$ $a=\ \ 0.615027-0.525764I$ $b=-0.685413+0.484737I$	$-1.46335-4.79145I$	0
$u=-1.31955-0.74333I$ $a=\ \ 0.615027+0.525764I$ $b=-0.685413-0.484737I$	$-1.46335+4.79145I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.429439$ $a=\ \ 1.79353$ $b=\ \ 0.601087$	-1.01489	-10.1760
$u=-1.22226+1.00947I$ $a=-0.531918+0.901402I$ $b=\ \ 0.616280-0.864859I$	$1.47470-8.28591I$	0
$u=-1.22226-1.00947I$ $a=-0.531918-0.901402I$ $b=\ \ 0.616280+0.864859I$	$1.47470+8.28591I$	0
$u=-0.414031$ $a=\ \ 0.710994$ $b=-1.65804$	-10.4601	57.7740
$u=\ \ 1.14674+1.11271I$ $a=-0.460592-1.320060I$ $b=-1.009770+0.565159I$	$-2.61261+9.14928I$	0
$u=\ \ 1.14674-1.11271I$ $a=-0.460592+1.320060I$ $b=-1.009770-0.565159I$	$-2.61261-9.14928I$	0
$u=-1.18789+1.17802I$ $a=\ \ 0.543314-1.107150I$ $b=-0.632118+1.066720I$	$-3.24903-12.04520I$	0
$u=-1.18789-1.17802I$ $a=\ \ 0.543314+1.107150I$ $b=-0.632118-1.066720I$	$-3.24903+12.04520I$	0
$u=\ \ 0.196988+0.216176I$ $a=-1.69062-5.29146I$ $b=-1.022500+0.540394I$	$-5.01539+2.29068I$	$-12.66920+0.63312I$
$u=\ \ 0.196988-0.216176I$ $a=-1.69062+5.29146I$ $b=-1.022500-0.540394I$	$-5.01539-2.29068I$	$-12.66920-0.63312I$

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.201500+0.178702I$		
$a=$	$1.82535+1.36786I$	$-0.28499-1.43055I$	$-2.82816+2.44341I$
$b=$	$0.857519-0.800677I$		
$u=$	$0.201500-0.178702I$		
$a=$	$1.82535-1.36786I$	$-0.28499+1.43055I$	$-2.82816-2.44341I$
$b=$	$0.857519+0.800677I$		
$u=$	$1.25320+1.19672I$		
$a=$	$0.19298+1.48373I$	$0.0844+14.1422I$	0
$b=$	$1.067090-0.707773I$		
$u=$	$1.25320-1.19672I$		
$a=$	$0.19298-1.48373I$	$0.0844-14.1422I$	0
$b=$	$1.067090+0.707773I$		
$u=$	$0.137389+0.136164I$		
$a=$	$-7.22185-4.14942I$	$-0.591650+0.928319I$	$-7.08998-2.83075I$
$b=$	$0.702404+0.610926I$		
$u=$	$0.137389-0.136164I$		
$a=$	$-7.22185+4.14942I$	$-0.591650-0.928319I$	$-7.08998+2.83075I$
$b=$	$0.702404-0.610926I$		
$u=$	$1.30054+1.28561I$		
$a=$	$0.00089-1.50453I$	$-4.9272+18.7232I$	0
$b=$	$-1.148010+0.781264I$		
$u=$	$1.30054-1.28561I$		
$a=$	$0.00089+1.50453I$	$-4.9272-18.7232I$	0
$b=$	$-1.148010-0.781264I$		
$u=$	$-2.08275+0.80093I$		
$a=$	$-0.267916-1.307150I$	$-3.83391-5.53172I$	0
$b=$	$1.018830+0.608303I$		
$u=$	$-2.08275-0.80093I$		
$a=$	$-0.267916+1.307150I$	$-3.83391+5.53172I$	0
$b=$	$1.018830-0.608303I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 2.25960 + 0.15223I$ $a = 0.04322 + 1.60132I$ $b = 0.572900 - 0.604567I$	$-2.52074 - 0.67374I$	0
$u = 2.25960 - 0.15223I$ $a = 0.04322 - 1.60132I$ $b = 0.572900 + 0.604567I$	$-2.52074 + 0.67374I$	0
$u = -2.26623 + 0.37498I$ $a = 0.08634 + 1.50403I$ $b = -0.800557 - 0.646744I$	$0.63350 - 1.90492I$	0
$u = -2.26623 - 0.37498I$ $a = 0.08634 - 1.50403I$ $b = -0.800557 + 0.646744I$	$0.63350 + 1.90492I$	0
$u = -2.85131 + 0.00560I$ $a = -0.00878 - 1.82788I$ $b = 0.529918 + 0.799159I$	$-2.76825 + 1.54043I$	0
$u = -2.85131 - 0.00560I$ $a = -0.00878 + 1.82788I$ $b = 0.529918 - 0.799159I$	$-2.76825 - 1.54043I$	0
$u = 2.86360 + 0.28993I$ $a = 0.325586 + 1.203530I$ $b = -0.891220 - 0.640795I$	$0.35372 - 3.11615I$	0
$u = 2.86360 - 0.28993I$ $a = 0.325586 - 1.203530I$ $b = -0.891220 + 0.640795I$	$0.35372 + 3.11615I$	0
$u = 3.09935 + 0.46402I$ $a = -0.548660 - 1.086970I$ $b = 1.065510 + 0.657494I$	$-4.35845 - 7.01409I$	0
$u = 3.09935 - 0.46402I$ $a = -0.548660 + 1.086970I$ $b = 1.065510 - 0.657494I$	$-4.35845 + 7.01409I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 3.54740$		
$a = \quad 0.397758$	-8.60113	0
$b = -1.14559$		
$u = \quad 4.23756$		
$a = \quad 0.938274$	-2.58861	0
$b = \quad 0.618644$		

II. $I_2^u = \langle b,\ u^5+2u^4-u^3-3u^2+a+2,\ u^6+u^5-u^4-2u^3+u+1\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -u^5-2u^4+u^3+3u^2-2 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u^5-2u^4+u^3+3u^2-2 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^4-u^2+1 \\ -u^4 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^5-3u^4+u^3+4u^2-3 \\ u^4 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^2+1 \\ u^4 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^4+u^2-1 \\ u^4 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3u^5-u^4-4u^3-3u^2+8u-8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_6	u^6
c_3, c_9	$u^6 + u^5 - u^4 - 2u^3 + u + 1$
c_4, c_{12}	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$
c_5	$(u-1)^6$
c_7, c_8	$(u+1)^6$
c_{10}, c_{11}	$u^6 - u^5 - u^4 + 2u^3 - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6	y^6
c_3, c_9, c_{10} c_{11}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_4, c_{12}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_5, c_7, c_8	$(y-1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = 0.344968 - 0.764807I$ $b = 0$	$0.245672 + 0.924305I$	$-5.68949 - 0.25702I$
$u = 1.002190 - 0.295542I$ $a = 0.344968 + 0.764807I$ $b = 0$	$0.245672 - 0.924305I$	$-5.68949 + 0.25702I$
$u = -0.428243 + 0.664531I$ $a = -1.68613 - 1.92635I$ $b = 0$	$-3.53554 + 0.92430I$	$-12.60470 + 5.55069I$
$u = -0.428243 - 0.664531I$ $a = -1.68613 + 1.92635I$ $b = 0$	$-3.53554 - 0.92430I$	$-12.60470 - 5.55069I$
$u = -1.073950 + 0.558752I$ $a = -0.158836 + 0.437639I$ $b = 0$	$-1.64493 - 5.69302I$	$-11.7058 + 8.3306I$
$u = -1.073950 - 0.558752I$ $a = -0.158836 - 0.437639I$ $b = 0$	$-1.64493 + 5.69302I$	$-11.7058 - 8.3306I$

III. $I_3^u = \langle b+u+2,\ a-1,\ u^2+3u+1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 3u+1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ -u-2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u+3 \\ -u-3 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0 \\ -u-3 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -2u-4 \\ u+3 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u+3 \\ -u-2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u+3 \\ -3 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u-3 \\ u+3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -61$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{12}	$u^2 - 3u + 1$
c_2, c_5	$u^2 + u - 1$
c_3, c_4	$u^2 + 3u + 1$
c_6, c_7, c_8	$u^2 - u - 1$
c_9	$(u-1)^2$
c_{10}	u^2
c_{11}	$(u+1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_{12}	$y^2 - 7y + 1$
c_2, c_5, c_6 c_7, c_8	$y^2 - 3y + 1$
c_9, c_{11}	$(y-1)^2$
c_{10}	y^2

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.381966$ $a = \ \ 1.00000$ $b = -1.61803$	-10.5276	-61.0000
$u = -2.61803$ $a = \ \ 1.00000$ $b = \ \ 0.618034$	-2.63189	-61.0000

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^6(u^2-3u+1)(u^{112}+42u^{111}+\cdots+36864u+4096)$
c_2	$u^6(u^2+u-1)(u^{112}-2u^{111}+\cdots+192u+64)$
c_3	$(u^2+3u+1)(u^6+u^5+\cdots+u+1)(u^{112}-5u^{111}+\cdots-32u+161)$
c_4	$(u^2+3u+1)(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^{112}-9u^{111}+\cdots+2324u-121)$
c_5	$((u-1)^6)(u^2+u-1)(u^{112}-8u^{111}+\cdots-7u+1)$
c_6	$u^6(u^2-u-1)(u^{112}-2u^{111}+\cdots+192u+64)$
c_7, c_8	$((u+1)^6)(u^2-u-1)(u^{112}-8u^{111}+\cdots-7u+1)$
c_9	$((u-1)^2)(u^6+u^5+\cdots+u+1)(u^{112}-4u^{111}+\cdots-35u+1)$
c_{10}	$u^2(u^6-u^5+\cdots-u+1)(u^{112}+18u^{111}+\cdots-48u+4)$
c_{11}	$((u+1)^2)(u^6-u^5+\cdots-u+1)(u^{112}-4u^{111}+\cdots-35u+1)$
c_{12}	$(u^2-3u+1)(u^6+3u^5+5u^4+4u^3+2u^2+u+1)$ $\cdot(u^{112}+9u^{111}+\cdots+2u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^6(y^2-7y+1)(y^{112}+46y^{111}+\cdots+1.71966\times10^9y+1.67772\times10^7)$
c_2, c_6	$y^6(y^2-3y+1)(y^{112}-42y^{111}+\cdots-36864y+4096)$
c_3	$(y^2-7y+1)(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{112}-109y^{111}+\cdots-254760y+25921)$
c_4	$(y^2-7y+1)(y^6+y^5+5y^4+6y^2+3y+1)$ $\cdot(y^{112}-109y^{111}+\cdots-1162588y+14641)$
c_5, c_7, c_8	$((y-1)^6)(y^2-3y+1)(y^{112}-96y^{111}+\cdots+115y+1)$
c_9, c_{11}	$(y-1)^2(y^6-3y^5+5y^4-4y^3+2y^2-y+1)$ $\cdot(y^{112}-68y^{111}+\cdots-815y+1)$
c_{10}	$y^2(y^6-3y^5+\cdots-y+1)(y^{112}-18y^{111}+\cdots-1464y+16)$
c_{12}	$(y^2-7y+1)(y^6+y^5+\cdots+3y+1)(y^{112}+11y^{111}+\cdots-8y+1)$