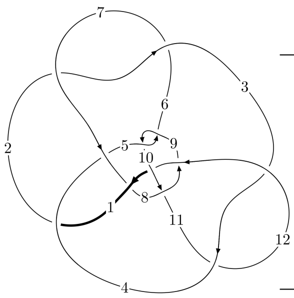
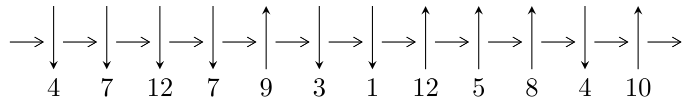
$12n_{0812}$ ($K12n_{0812}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -8.62027 \times 10^{76} u^{27} + 1.52401 \times 10^{78} u^{26} + \cdots + 1.53506 \times 10^{82} b + 5.13581 \times 10^{81},$$
$$1.24052 \times 10^{82} u^{27} + 6.32881 \times 10^{82} u^{26} + \cdots + 1.32476 \times 10^{85} a - 4.03731 \times 10^{85},$$
$$u^{28} + 5u^{27} + \cdots - 4802u + 863 \rangle$$
$$I_2^u = \langle 1.13096 \times 10^{16} u^{20} - 6.66784 \times 10^{16} u^{19} + \cdots + 3.05068 \times 10^{16} b - 2.79012 \times 10^{16},$$
$$8.06048 \times 10^{16} u^{20} - 5.63230 \times 10^{17} u^{19} + \cdots + 3.05068 \times 10^{16} a + 3.72544 \times 10^{17},\ u^{21} - 7u^{20} + \cdots + 7u - 1$$
$$I_3^u = \langle b - u + 1,\ a + u,\ u^2 + 1 \rangle$$
$$I_4^u = \langle b,\ a - 1,\ u - 1 \rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 52 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. $\boldsymbol{I_1^u = \langle -8.62 \times 10^{76} u^{27} + 1.52 \times 10^{78} u^{26} + \cdots + 1.54 \times 10^{82} b + 5.14 \times 10^{81},\ 1.24 \times 10^{82} u^{27} + 6.33 \times 10^{82} u^{26} + \cdots + 1.32 \times 10^{85} a - 4.04 \times 10^{85},\ u^{28} + 5u^{27} + \cdots - 4802u + 863 \rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -0.000936413u^{27} - 0.00477733u^{26} + \cdots - 8.38766u + 3.04758 \\ 5.61558 \times 10^{-6}u^{27} - 0.0000992801u^{26} + \cdots - 1.45523u - 0.334567 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -0.000263039u^{27} - 0.00140121u^{26} + \cdots - 1.03847u + 2.73441 \\ -0.000341879u^{27} - 0.00168333u^{26} + \cdots - 3.68231u + 0.495730 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -0.000263039u^{27} - 0.00140121u^{26} + \cdots - 1.03847u + 2.73441 \\ -0.000260254u^{27} - 0.00132797u^{26} + \cdots - 3.49625u + 0.421496 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.000523293u^{27} - 0.00272919u^{26} + \cdots - 4.53472u + 3.15591 \\ -0.000260254u^{27} - 0.00132797u^{26} + \cdots - 3.49625u + 0.421496 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.000610060u^{27} + 0.00328680u^{26} + \cdots + 2.78600u - 1.92051 \\ 0.000182108u^{27} + 0.00106951u^{26} + \cdots + 2.73273u - 0.211107 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.000559019u^{27} + 0.00284931u^{26} + \cdots + 3.47453u - 1.66495 \\ -0.000130430u^{27} - 0.000448498u^{26} + \cdots + 1.08342u - 0.0158707 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.000175320u^{27} - 0.000769585u^{26} + \cdots + 1.01760u + 1.26490 \\ -0.0000404126u^{27} - 0.000267309u^{26} + \cdots - 0.405692u + 0.352147 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -0.000930798u^{27} - 0.00487661u^{26} + \cdots - 9.84289u + 2.71301 \\ 5.61558 \times 10^{-6}u^{27} - 0.0000992801u^{26} + \cdots - 1.45523u - 0.334567 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -0.000726886u^{27} - 0.00405664u^{26} + \cdots - 4.78005u + 1.63403 \\ -0.0000519443u^{27} - 0.000325470u^{26} + \cdots - 2.70568u + 0.333453 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 0.00191539u^{27} + 0.00980758u^{26} + \cdots + 12.3575u - 10.5692$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 4u^{27} + \cdots + 167u - 43$
c_2, c_6	$u^{28} + 2u^{27} + \cdots + 207872u - 13157$
c_3, c_{11}	$u^{28} - 9u^{27} + \cdots + 10968u - 4784$
c_4	$u^{28} - 5u^{27} + \cdots + 4802u + 863$
c_5, c_9	$u^{28} + 13u^{26} + \cdots - 2972u - 4630$
c_7	$u^{28} - 3u^{27} + \cdots + 56u - 8$
c_8	$u^{28} + u^{27} + \cdots + 9495203u + 439429$
c_{10}	$u^{28} - u^{27} + \cdots + 14900u - 3331$
c_{12}	$u^{28} + 4u^{27} + \cdots - 100u - 25$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} - 58y^{27} + \cdots - 24449y + 1849$
c_2, c_6	$y^{28} + 60y^{27} + \cdots - 31398071702y + 173106649$
c_3, c_{11}	$y^{28} + 37y^{27} + \cdots - 349087040y + 22886656$
c_4	$y^{28} - 21y^{27} + \cdots - 7045376y + 744769$
c_5, c_9	$y^{28} + 26y^{27} + \cdots + 2260696y + 21436900$
c_7	$y^{28} + 11y^{27} + \cdots - 768y + 64$
c_8	$y^{28} - 85y^{27} + \cdots - 41732534261399y + 193097846041$
c_{10}	$y^{28} - 51y^{27} + \cdots - 22556382y + 11095561$
c_{12}	$y^{28} - 6y^{27} + \cdots - 10150y + 625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.459433+1.004210I$ $a=-0.769069-0.424094I$ $b=\ \ 2.01354+1.09433I$	$-10.03210-2.03721I$	$1.40807+1.51569I$
$u=-0.459433-1.004210I$ $a=-0.769069+0.424094I$ $b=\ \ 2.01354-1.09433I$	$-10.03210+2.03721I$	$1.40807-1.51569I$
$u=\ \ 0.273744+0.828909I$ $a=-0.31857-1.39833I$ $b=\ \ 0.676810+0.678060I$	$3.25948+1.87994I$	$1.127245+0.255189I$
$u=\ \ 0.273744-0.828909I$ $a=-0.31857+1.39833I$ $b=\ \ 0.676810-0.678060I$	$3.25948-1.87994I$	$1.127245-0.255189I$
$u=\ \ 0.229511+0.822937I$ $a=\ \ 0.524171+0.383309I$ $b=\ \ 0.390248-0.173189I$	$0.13617-2.17117I$	$-0.52994+4.56699I$
$u=\ \ 0.229511-0.822937I$ $a=\ \ 0.524171-0.383309I$ $b=\ \ 0.390248+0.173189I$	$0.13617+2.17117I$	$-0.52994-4.56699I$
$u=\ \ 0.822714$ $a=\ \ 0.146759$ $b=-0.732140$	-1.55304	-5.27900
$u=\ \ 0.836672+0.864882I$ $a=-0.56617+1.86096I$ $b=-0.562756-0.399087I$	$1.97057-6.52494I$	$-1.83111+8.72203I$
$u=\ \ 0.836672-0.864882I$ $a=-0.56617-1.86096I$ $b=-0.562756+0.399087I$	$1.97057+6.52494I$	$-1.83111-8.72203I$
$u=-0.480459+0.282436I$ $a=\ \ 1.41640+0.49816I$ $b=\ \ 0.516137-0.268437I$	$1.51898-0.09189I$	$7.42707-0.14730I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.480459-0.282436I$ $a=\ \ 1.41640-0.49816I$ $b=\ \ 0.516137+0.268437I$	$1.51898+0.09189I$	$7.42707+0.14730I$
$u=-0.43263+1.42005I$ $a=-0.322046-1.165460I$ $b=-0.08622+2.09948I$	$11.60450+1.52928I$	$5.96173-5.20161I$
$u=-0.43263-1.42005I$ $a=-0.322046+1.165460I$ $b=-0.08622-2.09948I$	$11.60450-1.52928I$	$5.96173+5.20161I$
$u=\ \ 1.36989+0.62388I$ $a=-0.522052-0.287024I$ $b=-0.856845+0.272486I$	$-2.93559-3.60574I$	$-2.03784+5.31911I$
$u=\ \ 1.36989-0.62388I$ $a=-0.522052+0.287024I$ $b=-0.856845-0.272486I$	$-2.93559+3.60574I$	$-2.03784-5.31911I$
$u=\ \ 0.216176+0.152550I$ $a=\ \ 1.23983-1.38812I$ $b=-0.694421-0.417839I$	$-1.34198-0.63181I$	$-7.39383+3.55585I$
$u=\ \ 0.216176-0.152550I$ $a=\ \ 1.23983+1.38812I$ $b=-0.694421+0.417839I$	$-1.34198+0.63181I$	$-7.39383-3.55585I$
$u=\ \ 1.55762+0.81392I$ $a=\ \ 0.785031-0.314648I$ $b=\ \ 0.41609+1.75558I$	$2.40615-3.22239I$	$0.05887+2.24675I$
$u=\ \ 1.55762-0.81392I$ $a=\ \ 0.785031+0.314648I$ $b=\ \ 0.41609-1.75558I$	$2.40615+3.22239I$	$0.05887-2.24675I$
$u=-1.73297+0.36682I$ $a=\ \ 0.207455-0.021422I$ $b=-0.093173-1.202150I$	$-3.72120+5.07083I$	$-0.01986-3.99214I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.73297 - 0.36682I$ $a = 0.207455 + 0.021422I$ $b = -0.093173 + 1.202150I$	$-3.72120 - 5.07083I$	$-0.01986 + 3.99214I$
$u = -1.05080 + 2.14321I$ $a = 0.291815 + 0.781957I$ $b = 1.45524 - 3.34171I$	$14.9730 + 2.7474I$	0
$u = -1.05080 - 2.14321I$ $a = 0.291815 - 0.781957I$ $b = 1.45524 + 3.34171I$	$14.9730 - 2.7474I$	0
$u = -1.85519 + 1.64553I$ $a = -0.554886 - 0.593820I$ $b = -1.69865 + 2.55029I$	$15.8138 + 12.8690I$	0
$u = -1.85519 - 1.64553I$ $a = -0.554886 + 0.593820I$ $b = -1.69865 - 2.55029I$	$15.8138 - 12.8690I$	0
$u = 2.92172$ $a = 0.782361$ $b = 2.34197$	-6.12420	0
$u = -2.84436 + 1.35079I$ $a = 0.540100 + 0.227911I$ $b = 2.21908 - 3.05252I$	$14.6001 + 2.0794I$	0
$u = -2.84436 - 1.35079I$ $a = 0.540100 - 0.227911I$ $b = 2.21908 + 3.05252I$	$14.6001 - 2.0794I$	0

II.
$\boldsymbol{I_2^u = \langle 1.13\times 10^{16}u^{20} - 6.67\times 10^{16}u^{19} + \cdots + 3.05\times 10^{16}b - 2.79\times 10^{16},\ 8.06\times 10^{16}u^{20} - 5.63\times 10^{17}u^{19} + \cdots + 3.05\times 10^{16}a + 3.73\times 10^{17},\ u^{21} - 7u^{20} + \cdots + 7u - 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -2.64219u^{20} + 18.4624u^{19} + \cdots + 82.2885u - 12.2118 \\ -0.370723u^{20} + 2.18569u^{19} + \cdots - 3.27253u + 0.914589 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 2.45654u^{20} - 16.5538u^{19} + \cdots - 46.8691u + 2.84798 \\ -0.218854u^{20} + 1.77628u^{19} + \cdots + 6.32405u - 0.684934 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 2.45654u^{20} - 16.5538u^{19} + \cdots - 46.8691u + 2.84798 \\ -0.399174u^{20} + 2.83676u^{19} + \cdots + 8.36141u - 1.32692 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 2.05736u^{20} - 13.7170u^{19} + \cdots - 38.5077u + 1.52106 \\ -0.399174u^{20} + 2.83676u^{19} + \cdots + 8.36141u - 1.32692 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.847229u^{20} - 5.50818u^{19} + \cdots - 36.8397u + 10.1554 \\ 0.852360u^{20} - 4.81815u^{19} + \cdots - 3.93557u - 0.0851849 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -2.83718u^{20} + 20.1617u^{19} + \cdots + 69.2365u - 4.68421 \\ 1.24144u^{20} - 7.58901u^{19} + \cdots - 14.9295u + 2.08597 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.608465u^{20} - 3.20801u^{19} + \cdots + 25.3385u - 10.0693 \\ -0.0544761u^{20} + 0.450258u^{19} + \cdots + 0.815373u + 0.880016 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -3.01292u^{20} + 20.6481u^{19} + \cdots + 79.0160u - 11.2973 \\ -0.370723u^{20} + 2.18569u^{19} + \cdots - 3.27253u + 0.914589 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -2.82469u^{20} + 19.6190u^{19} + \cdots + 59.2542u - 2.89968 \\ 0.763744u^{20} - 4.65415u^{19} + \cdots - 11.7302u + 1.63071 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $=$
$-\frac{142462361688498817}{30506810548263331}u^{20} + \frac{853512483449208650}{30506810548263331}u^{19} + \cdots + \frac{205869171519914537}{30506810548263331}u + \frac{184825108905214746}{30506810548263331}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{21} - 14u^{20} + \cdots - 276u + 29$
c_2	$u^{21} + 4u^{20} + \cdots - 9u + 1$
c_3	$u^{21} - u^{20} + \cdots - 12u - 2$
c_4	$u^{21} - 7u^{20} + \cdots + 7u - 1$
c_5	$u^{21} - u^{20} + \cdots + 12u + 2$
c_6	$u^{21} - 4u^{20} + \cdots - 9u - 1$
c_7	$u^{21} + u^{19} + \cdots + 40u + 16$
c_8	$u^{21} - u^{20} + \cdots - 210u + 293$
c_9	$u^{21} + u^{20} + \cdots + 12u - 2$
c_{10}	$u^{21} - 5u^{20} + \cdots + 3u - 1$
c_{11}	$u^{21} + u^{20} + \cdots - 12u + 2$
c_{12}	$u^{21} - 6u^{20} + \cdots + 5u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{21} - 40y^{20} + \cdots + 15276y - 841$
c_2, c_6	$y^{21} + 2y^{20} + \cdots + y - 1$
c_3, c_{11}	$y^{21} + y^{20} + \cdots + 20y - 4$
c_4	$y^{21} - 15y^{20} + \cdots - 21y - 1$
c_5, c_9	$y^{21} + 17y^{20} + \cdots - 12y - 4$
c_7	$y^{21} + 2y^{20} + \cdots - 288y - 256$
c_8	$y^{21} - 15y^{20} + \cdots - 660858y - 85849$
c_{10}	$y^{21} - 21y^{20} + \cdots - 15y - 1$
c_{12}	$y^{21} + 8y^{19} + \cdots + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.595417 + 0.714984I$ $a = 1.16017 - 2.46835I$ $b = -0.107234 + 0.749883I$	$2.73077 - 6.13856I$	$5.46973 + 5.13949I$
$u = 0.595417 - 0.714984I$ $a = 1.16017 + 2.46835I$ $b = -0.107234 - 0.749883I$	$2.73077 + 6.13856I$	$5.46973 - 5.13949I$
$u = 0.675943 + 0.566498I$ $a = -0.855139 - 0.146693I$ $b = -1.191560 - 0.086586I$	$-2.83225 - 2.16193I$	$-2.45279 - 0.29746I$
$u = 0.675943 - 0.566498I$ $a = -0.855139 + 0.146693I$ $b = -1.191560 + 0.086586I$	$-2.83225 + 2.16193I$	$-2.45279 + 0.29746I$
$u = -0.749611 + 0.301572I$ $a = -0.976455 + 0.377205I$ $b = 1.43585 + 0.70439I$	$-10.84280 - 2.10084I$	$-9.12543 + 2.93256I$
$u = -0.749611 - 0.301572I$ $a = -0.976455 - 0.377205I$ $b = 1.43585 - 0.70439I$	$-10.84280 + 2.10084I$	$-9.12543 - 2.93256I$
$u = 1.290970 + 0.025247I$ $a = 0.522611 + 0.056622I$ $b = 0.899485 + 0.649626I$	$-2.26631 - 5.66339I$	$1.20781 + 8.07266I$
$u = 1.290970 - 0.025247I$ $a = 0.522611 - 0.056622I$ $b = 0.899485 - 0.649626I$	$-2.26631 + 5.66339I$	$1.20781 - 8.07266I$
$u = 0.88794 + 1.11736I$ $a = -0.351110 + 1.218340I$ $b = -0.427353 - 1.060580I$	$1.01172 - 5.35912I$	$-2.61035 + 4.49568I$
$u = 0.88794 - 1.11736I$ $a = -0.351110 - 1.218340I$ $b = -0.427353 + 1.060580I$	$1.01172 + 5.35912I$	$-2.61035 - 4.49568I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.012030 + 0.568575I$ $a = -0.14618 - 1.76060I$ $b = -0.721762 + 0.323260I$	$0.490057 - 0.177120I$	$-2.36077 + 0.19893I$
$u = 0.012030 - 0.568575I$ $a = -0.14618 + 1.76060I$ $b = -0.721762 - 0.323260I$	$0.490057 + 0.177120I$	$-2.36077 - 0.19893I$
$u = -1.43446 + 0.38552I$ $a = -0.039878 + 0.195657I$ $b = -0.472267 - 0.321301I$	$-4.44088 + 4.96227I$	$-12.04870 - 4.19355I$
$u = -1.43446 - 0.38552I$ $a = -0.039878 - 0.195657I$ $b = -0.472267 + 0.321301I$	$-4.44088 - 4.96227I$	$-12.04870 + 4.19355I$
$u = 1.50701 + 0.33648I$ $a = -0.866254 - 0.158557I$ $b = -0.676026 + 0.144051I$	$-3.97261 - 2.80730I$	$-6.02581 + 3.31421I$
$u = 1.50701 - 0.33648I$ $a = -0.866254 + 0.158557I$ $b = -0.676026 - 0.144051I$	$-3.97261 + 2.80730I$	$-6.02581 - 3.31421I$
$u = -0.73848 + 1.41590I$ $a = 0.498243 + 1.007080I$ $b = 0.35528 - 2.25147I$	$10.95750 + 1.10571I$	$-3.84568 + 1.01862I$
$u = -0.73848 - 1.41590I$ $a = 0.498243 - 1.007080I$ $b = 0.35528 + 2.25147I$	$10.95750 - 1.10571I$	$-3.84568 - 1.01862I$
$u = 0.113196 + 0.211636I$ $a = -0.39824 + 7.94323I$ $b = 0.457617 - 0.638917I$	$4.17812 + 2.68951I$	$7.17893 - 2.27785I$
$u = 0.113196 - 0.211636I$ $a = -0.39824 - 7.94323I$ $b = 0.457617 + 0.638917I$	$4.17812 - 2.68951I$	$7.17893 + 2.27785I$

	Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	2.68010		
$a =$	0.904455	-6.47598	0
$b =$	1.89595		

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

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} -u \\ u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u \\ 2u \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u \\ 3u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -1 \\ u - 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1 \\ u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -1.000000I$ $b = -1.00000 + 1.00000I$	0	0
$u = -1.000000I$ $a = 1.000000I$ $b = -1.00000 - 1.00000I$	0	0

IV. $I_4^u = \langle b,\ a-1,\ u-1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4 c_6, c_8, c_{10} c_{12}	$y-1$
c_3, c_5, c_7 c_9, c_{11}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000		
$a =$	1.00000	0	0
$b =$	0		

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)(u^2+1)(u^{21}-14u^{20}+\cdots-276u+29)$ $\cdot(u^{28}-4u^{27}+\cdots+167u-43)$
c_2	$((u-1)^3)(u^{21}+4u^{20}+\cdots-9u+1)$ $\cdot(u^{28}+2u^{27}+\cdots+207872u-13157)$
c_3	$u(u^2+2u+2)(u^{21}-u^{20}+\cdots-12u-2)$ $\cdot(u^{28}-9u^{27}+\cdots+10968u-4784)$
c_4	$(u-1)(u^2+1)(u^{21}-7u^{20}+\cdots+7u-1)(u^{28}-5u^{27}+\cdots+4802u+863)$
c_5	$u(u^2+2u+2)(u^{21}-u^{20}+\cdots+12u+2)$ $\cdot(u^{28}+13u^{26}+\cdots-2972u-4630)$
c_6	$((u+1)^3)(u^{21}-4u^{20}+\cdots-9u-1)$ $\cdot(u^{28}+2u^{27}+\cdots+207872u-13157)$
c_7	$u^3(u^{21}+u^{19}+\cdots+40u+16)(u^{28}-3u^{27}+\cdots+56u-8)$
c_8	$((u+1)^3)(u^{21}-u^{20}+\cdots-210u+293)$ $\cdot(u^{28}+u^{27}+\cdots+9495203u+439429)$
c_9	$u(u^2-2u+2)(u^{21}+u^{20}+\cdots+12u-2)$ $\cdot(u^{28}+13u^{26}+\cdots-2972u-4630)$
c_{10}	$(u-1)(u^2+1)(u^{21}-5u^{20}+\cdots+3u-1)$ $\cdot(u^{28}-u^{27}+\cdots+14900u-3331)$
c_{11}	$u(u^2-2u+2)(u^{21}+u^{20}+\cdots-12u+2)$ $\cdot(u^{28}-9u^{27}+\cdots+10968u-4784)$
c_{12}	$(u-1)(u^2+1)(u^{21}-6u^{20}+\cdots+5u-1)(u^{28}+4u^{27}+\cdots-100u-25)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)(y+1)^2(y^{21}-40y^{20}+\cdots+15276y-841)$ $\cdot(y^{28}-58y^{27}+\cdots-24449y+1849)$
c_2, c_6	$((y-1)^3)(y^{21}+2y^{20}+\cdots+y-1)$ $\cdot(y^{28}+60y^{27}+\cdots-31398071702y+173106649)$
c_3, c_{11}	$y(y^2+4)(y^{21}+y^{20}+\cdots+20y-4)$ $\cdot(y^{28}+37y^{27}+\cdots-349087040y+22886656)$
c_4	$(y-1)(y+1)^2(y^{21}-15y^{20}+\cdots-21y-1)$ $\cdot(y^{28}-21y^{27}+\cdots-7045376y+744769)$
c_5, c_9	$y(y^2+4)(y^{21}+17y^{20}+\cdots-12y-4)$ $\cdot(y^{28}+26y^{27}+\cdots+2260696y+21436900)$
c_7	$y^3(y^{21}+2y^{20}+\cdots-288y-256)(y^{28}+11y^{27}+\cdots-768y+64)$
c_8	$((y-1)^3)(y^{21}-15y^{20}+\cdots-660858y-85849)$ $\cdot(y^{28}-85y^{27}+\cdots-41732534261399y+193097846041)$
c_{10}	$(y-1)(y+1)^2(y^{21}-21y^{20}+\cdots-15y-1)$ $\cdot(y^{28}-51y^{27}+\cdots-22556382y+11095561)$
c_{12}	$(y-1)(y+1)^2(y^{21}+8y^{19}+\cdots+13y-1)$ $\cdot(y^{28}-6y^{27}+\cdots-10150y+625)$