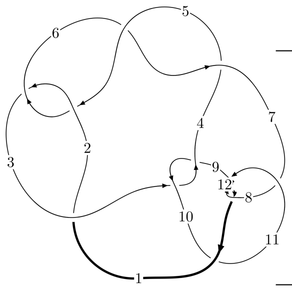
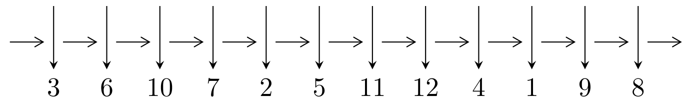
$12a_{0421}$ ($K12a_{0421}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -39u^{74} + 70u^{73} + \cdots + 4b + 8,\ 25u^{74} - 114u^{73} + \cdots + 4a + 33,\ u^{75} - 4u^{74} + \cdots + 5u - 1 \rangle$$
$$I_2^u = \langle b + u,\ u^2 + a + u,\ u^3 + u^2 - 1 \rangle$$
$$I_3^u = \langle -u^2 a + b,\ -u^2 a + a^2 - 2au + u^2 - a + 2u + 2,\ u^3 + u^2 - 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 84 representations.

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[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. $I_1^u = \langle -39u^{74} + 70u^{73} + \cdots + 4b + 8,\ 25u^{74} - 114u^{73} + \cdots + 4a + 33,\ u^{75} - 4u^{74} + \cdots + 5u - 1\rangle$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -6.25000u^{74} + 28.5000u^{73} + \cdots + 42.5000u - 8.25000 \\ \frac{39}{4}u^{74} - \frac{35}{2}u^{73} + \cdots + \frac{1}{4}u - 2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^5 + u \\ u^5 - u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 + 1 \\ -u^4 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -2u^{74} + \frac{27}{4}u^{73} + \cdots + \frac{17}{2}u + \frac{1}{4} \\ \frac{7}{2}u^{74} - \frac{35}{4}u^{73} + \cdots - 10u + \frac{7}{4} \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -u^3 \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{4}u^{73} - \frac{3}{4}u^{72} + \cdots - \frac{1}{4}u - 1 \\ \frac{1}{4}u^{73} - \frac{3}{4}u^{72} + \cdots + \frac{1}{4}u^2 + \frac{7}{4}u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -\frac{7}{4}u^{74} + \frac{7}{2}u^{73} + \cdots + \frac{5}{2}u + \frac{5}{4} \\ \frac{5}{4}u^{74} - \frac{11}{2}u^{73} + \cdots - \frac{41}{4}u + 2 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{5}{4}u^{73} + \frac{7}{4}u^{72} + \cdots - \frac{29}{4}u + 3 \\ -\frac{1}{4}u^{74} - \frac{1}{2}u^{73} + \cdots - 8u + \frac{7}{4} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{19}{4}u^{74} + \frac{3}{2}u^{73} + \cdots + \frac{97}{4}u - \frac{45}{2}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4, c_6	$u^{75} + 18u^{74} + \cdots + 21u + 1$
c_2, c_5	$u^{75} + 4u^{74} + \cdots + 5u + 1$
c_3, c_9	$u^{75} + u^{74} + \cdots + 2048u + 512$
c_7	$u^{75} + 4u^{74} + \cdots - 4485u + 1153$
c_8, c_{11}, c_{12}	$u^{75} - 4u^{74} + \cdots - 3u + 1$
c_{10}	$u^{75} - 14u^{74} + \cdots - 2323u + 1251$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6	$y^{75} + 82y^{74} + \cdots + 197y - 1$
c_2, c_5	$y^{75} - 18y^{74} + \cdots + 21y - 1$
c_3, c_9	$y^{75} + 49y^{74} + \cdots - 4325376y - 262144$
c_7	$y^{75} + 14y^{74} + \cdots + 3138453y - 1329409$
c_8, c_{11}, c_{12}	$y^{75} + 70y^{74} + \cdots + 29y - 1$
c_{10}	$y^{75} + 42y^{74} + \cdots - 3150503y - 1565001$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.981997 + 0.062495I$ $a = -0.158117 + 0.959495I$ $b = -0.0572768 - 0.0273762I$	$-1.33660 + 1.51490I$	$-12.00000 + 0.I$
$u = 0.981997 - 0.062495I$ $a = -0.158117 - 0.959495I$ $b = -0.0572768 + 0.0273762I$	$-1.33660 - 1.51490I$	$-12.00000 + 0.I$
$u = -0.925744 + 0.463913I$ $a = 1.45832 + 0.58863I$ $b = 1.102820 + 0.176212I$	$1.74127 + 3.47396I$	0
$u = -0.925744 - 0.463913I$ $a = 1.45832 - 0.58863I$ $b = 1.102820 - 0.176212I$	$1.74127 - 3.47396I$	0
$u = 1.039500 + 0.060819I$ $a = 0.146948 - 1.100270I$ $b = 0.0726854 - 0.0349259I$	$4.21274 + 4.43090I$	0
$u = 1.039500 - 0.060819I$ $a = 0.146948 + 1.100270I$ $b = 0.0726854 + 0.0349259I$	$4.21274 - 4.43090I$	0
$u = 0.906111 + 0.214366I$ $a = 0.546312 - 0.823518I$ $b = 0.124447 + 0.208700I$	$0.534887 - 0.279588I$	$-13.49764 + 1.12643I$
$u = 0.906111 - 0.214366I$ $a = 0.546312 + 0.823518I$ $b = 0.124447 - 0.208700I$	$0.534887 + 0.279588I$	$-13.49764 - 1.12643I$
$u = -0.986819 + 0.430211I$ $a = -1.67189 - 0.45818I$ $b = -1.237830 - 0.093040I$	$0.79249 + 7.26020I$	0
$u = -0.986819 - 0.430211I$ $a = -1.67189 + 0.45818I$ $b = -1.237830 + 0.093040I$	$0.79249 - 7.26020I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.857424 + 0.324976I$ $a = 1.81994 + 1.10430I$ $b = 1.309870 + 0.479319I$	$1.07508 + 4.38196I$	$-12.0000 - 8.6783I$
$u = -0.857424 - 0.324976I$ $a = 1.81994 - 1.10430I$ $b = 1.309870 - 0.479319I$	$1.07508 - 4.38196I$	$-12.0000 + 8.6783I$
$u = 0.813449 + 0.419843I$ $a = 0.978987 - 0.633068I$ $b = 0.035809 + 0.678441I$	$3.42977 - 5.57287I$	$-9.66221 + 6.64681I$
$u = 0.813449 - 0.419843I$ $a = 0.978987 + 0.633068I$ $b = 0.035809 - 0.678441I$	$3.42977 + 5.57287I$	$-9.66221 - 6.64681I$
$u = -0.784284 + 0.772305I$ $a = -0.154248 - 0.741875I$ $b = -0.320352 - 0.513152I$	$6.62851 + 1.39151I$	0
$u = -0.784284 - 0.772305I$ $a = -0.154248 + 0.741875I$ $b = -0.320352 + 0.513152I$	$6.62851 - 1.39151I$	0
$u = -1.020000 + 0.436284I$ $a = 1.70688 + 0.35049I$ $b = 1.263320 + 0.023389I$	$6.45080 + 10.69250I$	0
$u = -1.020000 - 0.436284I$ $a = 1.70688 - 0.35049I$ $b = 1.263320 - 0.023389I$	$6.45080 - 10.69250I$	0
$u = -0.975758 + 0.543303I$ $a = -1.317190 - 0.277849I$ $b = -0.999148 + 0.021410I$	$7.84793 + 1.37305I$	0
$u = -0.975758 - 0.543303I$ $a = -1.317190 + 0.277849I$ $b = -0.999148 - 0.021410I$	$7.84793 - 1.37305I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.804622 + 0.341592I$ $a = -0.825449 + 0.643517I$ $b = -0.009664 - 0.476551I$	$-1.71326 - 2.52197I$	$-15.2219 + 7.1642I$
$u = 0.804622 - 0.341592I$ $a = -0.825449 - 0.643517I$ $b = -0.009664 + 0.476551I$	$-1.71326 + 2.52197I$	$-15.2219 - 7.1642I$
$u = -0.437073 + 0.751160I$ $a = -0.242441 - 1.250960I$ $b = -0.725204 - 0.713923I$	$9.56548 + 3.33472I$	$-2.00493 - 2.98614I$
$u = -0.437073 - 0.751160I$ $a = -0.242441 + 1.250960I$ $b = -0.725204 + 0.713923I$	$9.56548 - 3.33472I$	$-2.00493 + 2.98614I$
$u = -0.877037 + 0.715044I$ $a = 0.404333 + 0.188560I$ $b = 0.346024 + 0.046454I$	$2.43349 + 2.73740I$	0
$u = -0.877037 - 0.715044I$ $a = 0.404333 - 0.188560I$ $b = 0.346024 - 0.046454I$	$2.43349 - 2.73740I$	0
$u = -0.756510 + 0.278228I$ $a = -1.71639 - 1.68146I$ $b = -1.23262 - 0.78437I$	$-2.12507 + 1.06185I$	$-14.2779 - 5.9921I$
$u = -0.756510 - 0.278228I$ $a = -1.71639 + 1.68146I$ $b = -1.23262 + 0.78437I$	$-2.12507 - 1.06185I$	$-14.2779 + 5.9921I$
$u = -0.286571 + 0.749374I$ $a = 0.161353 + 1.250890I$ $b = 0.819985 + 0.663073I$	$8.84242 - 6.41894I$	$-2.81064 + 3.75509I$
$u = -0.286571 - 0.749374I$ $a = 0.161353 - 1.250890I$ $b = 0.819985 - 0.663073I$	$8.84242 + 6.41894I$	$-2.81064 - 3.75509I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.942042+0.743552I$ $a=-0.619040+0.245049I$ $b=-0.421240+0.323729I$	$6.16024+4.33025I$	0
$u=-0.942042-0.743552I$ $a=-0.619040-0.245049I$ $b=-0.421240-0.323729I$	$6.16024-4.33025I$	0
$u=-0.401183+0.671168I$ $a=\ \ 0.241879+1.316680I$ $b=\ \ 0.732361+0.665991I$	$3.42074+0.68845I$	$-5.14590-3.23104I$
$u=-0.401183-0.671168I$ $a=\ \ 0.241879-1.316680I$ $b=\ \ 0.732361-0.665991I$	$3.42074-0.68845I$	$-5.14590+3.23104I$
$u=\ \ 0.885217+0.845939I$ $a=\ \ 0.53098-2.05656I$ $b=\ \ 3.24456-0.48084I$	$8.13392+0.93562I$	0
$u=\ \ 0.885217-0.845939I$ $a=\ \ 0.53098+2.05656I$ $b=\ \ 3.24456+0.48084I$	$8.13392-0.93562I$	0
$u=-0.891011+0.845695I$ $a=-0.339704+0.721513I$ $b=-0.088337+0.655456I$	$5.33943+1.26962I$	0
$u=-0.891011-0.845695I$ $a=-0.339704-0.721513I$ $b=-0.088337-0.655456I$	$5.33943-1.26962I$	0
$u=\ \ 0.906133+0.837441I$ $a=-0.74848+2.16155I$ $b=-3.32632+0.25159I$	$4.35553-3.11893I$	0
$u=\ \ 0.906133-0.837441I$ $a=-0.74848-2.16155I$ $b=-3.32632-0.25159I$	$4.35553+3.11893I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.842072 + 0.904011I$ $a = -0.45004 + 1.46873I$ $b = -2.75133 + 0.55585I$	$9.54844 + 4.90423I$	0
$u = 0.842072 - 0.904011I$ $a = -0.45004 - 1.46873I$ $b = -2.75133 - 0.55585I$	$9.54844 - 4.90423I$	0
$u = 0.834552 + 0.915946I$ $a = 0.46805 - 1.38257I$ $b = 2.69223 - 0.53550I$	$15.4454 + 8.6299I$	0
$u = 0.834552 - 0.915946I$ $a = 0.46805 + 1.38257I$ $b = 2.69223 + 0.53550I$	$15.4454 - 8.6299I$	0
$u = -0.304636 + 0.693805I$ $a = -0.157840 - 1.295690I$ $b = -0.782092 - 0.642140I$	$2.97970 - 3.17000I$	$-6.43688 + 4.00657I$
$u = -0.304636 - 0.693805I$ $a = -0.157840 + 1.295690I$ $b = -0.782092 + 0.642140I$	$2.97970 + 3.17000I$	$-6.43688 - 4.00657I$
$u = 0.860351 + 0.897542I$ $a = 0.51786 - 1.57748I$ $b = 2.83408 - 0.51095I$	$10.46520 + 0.47593I$	0
$u = 0.860351 - 0.897542I$ $a = 0.51786 + 1.57748I$ $b = 2.83408 + 0.51095I$	$10.46520 - 0.47593I$	0
$u = -0.922117 + 0.835418I$ $a = 0.454904 - 0.666000I$ $b = 0.201003 - 0.635777I$	$5.24277 + 4.98689I$	0
$u = -0.922117 - 0.835418I$ $a = 0.454904 + 0.666000I$ $b = 0.201003 + 0.635777I$	$5.24277 - 4.98689I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.889456+0.870616I$ $a=0.352412-0.809727I$ $b=0.076324-0.735989I$	$11.29310-1.63609I$	0
$u=-0.889456-0.870616I$ $a=0.352412+0.809727I$ $b=0.076324+0.735989I$	$11.29310+1.63609I$	0
$u=0.927268+0.831795I$ $a=0.96690-2.16128I$ $b=3.28157-0.01724I$	$8.00279-7.18225I$	0
$u=0.927268-0.831795I$ $a=0.96690+2.16128I$ $b=3.28157+0.01724I$	$8.00279+7.18225I$	0
$u=-0.937813+0.850575I$ $a=-0.516072+0.722653I$ $b=-0.241335+0.698457I$	$11.13980+8.01758I$	0
$u=-0.937813-0.850575I$ $a=-0.516072-0.722653I$ $b=-0.241335-0.698457I$	$11.13980-8.01758I$	0
$u=0.878651+0.913361I$ $a=-0.66681+1.55279I$ $b=-2.81360+0.40519I$	$17.4252-1.9074I$	0
$u=0.878651-0.913361I$ $a=-0.66681-1.55279I$ $b=-2.81360-0.40519I$	$17.4252+1.9074I$	0
$u=-0.682598+0.202478I$ $a=1.58421+2.38354I$ $b=1.11380+1.14569I$	$2.17296-2.32447I$	$-5.79052-5.26965I$
$u=-0.682598-0.202478I$ $a=1.58421-2.38354I$ $b=1.11380-1.14569I$	$2.17296+2.32447I$	$-5.79052+5.26965I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.543130 + 0.459714I$ $a = -0.770471 + 0.389630I$ $b = 0.594716 - 0.431365I$	$4.27941 + 2.11715I$	$-6.41999 - 0.25459I$
$u = 0.543130 - 0.459714I$ $a = -0.770471 - 0.389630I$ $b = 0.594716 + 0.431365I$	$4.27941 - 2.11715I$	$-6.41999 + 0.25459I$
$u = 0.970822 + 0.847794I$ $a = 1.16946 - 1.91708I$ $b = 2.93004 + 0.10560I$	$10.11250 - 6.92850I$	0
$u = 0.970822 - 0.847794I$ $a = 1.16946 + 1.91708I$ $b = 2.93004 - 0.10560I$	$10.11250 + 6.92850I$	0
$u = 0.984627 + 0.840414I$ $a = -1.24021 + 1.90311I$ $b = -2.86576 - 0.17531I$	$9.0945 - 11.3508I$	0
$u = 0.984627 - 0.840414I$ $a = -1.24021 - 1.90311I$ $b = -2.86576 + 0.17531I$	$9.0945 + 11.3508I$	0
$u = 0.970887 + 0.869077I$ $a = -1.12355 + 1.83005I$ $b = -2.87405 - 0.00559I$	$17.1288 - 4.6645I$	0
$u = 0.970887 - 0.869077I$ $a = -1.12355 - 1.83005I$ $b = -2.87405 + 0.00559I$	$17.1288 + 4.6645I$	0
$u = 0.995376 + 0.841787I$ $a = 1.26684 - 1.86881I$ $b = 2.80356 + 0.17862I$	$14.9316 - 15.1163I$	0
$u = 0.995376 - 0.841787I$ $a = 1.26684 + 1.86881I$ $b = 2.80356 - 0.17862I$	$14.9316 + 15.1163I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.569082 + 0.163141I$ $a = 0.783151 - 0.295781I$ $b = -0.278782 + 0.143296I$	$-0.755875 - 0.043813I$	$-11.52697 - 0.84981I$
$u = 0.569082 - 0.163141I$ $a = 0.783151 + 0.295781I$ $b = -0.278782 - 0.143296I$	$-0.755875 + 0.043813I$	$-11.52697 + 0.84981I$
$u = 0.020011 + 0.415797I$ $a = -0.562604 + 1.289900I$ $b = 0.631869 + 0.282943I$	$3.06974 - 1.95978I$	$-5.26928 + 3.75701I$
$u = 0.020011 - 0.415797I$ $a = -0.562604 - 1.289900I$ $b = 0.631869 - 0.282943I$	$3.06974 + 1.95978I$	$-5.26928 - 3.75701I$
$u = 0.288433$ $a = 1.44160$ $b = -0.372279$	-0.730103	-13.0940

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

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^2-u \\ -u \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^2+1 \\ -u^2-u+1 \end{pmatrix}$$

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

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

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

$$a_8 = \begin{pmatrix} u^2-u-1 \\ u^2-1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= u^2-7u-13$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.877439 + 0.744862I$ $a = 0.662359 + 0.562280I$ $b = 0.877439 - 0.744862I$	$6.04826 + 5.65624I$	$-6.64285 - 6.52117I$
$u = -0.877439 - 0.744862I$ $a = 0.662359 - 0.562280I$ $b = 0.877439 + 0.744862I$	$6.04826 - 5.65624I$	$-6.64285 + 6.52117I$
$u = 0.754878$ $a = -1.32472$ $b = -0.754878$	-2.22691	-17.7140

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 6u^2a + au + a - 5u - 17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.877439 + 0.744862I$ $a = -0.447279 + 0.744862I$ $b = 0.877439 + 0.744862I$	6.04826	$-7.95781 + 0.50299I$
$u = -0.877439 + 0.744862I$ $a = -0.092519 - 0.562280I$ $b = -0.754878$	$1.91067 + 2.82812I$	$-16.7346 - 3.8621I$
$u = -0.877439 - 0.744862I$ $a = -0.447279 - 0.744862I$ $b = 0.877439 - 0.744862I$	6.04826	$-7.95781 - 0.50299I$
$u = -0.877439 - 0.744862I$ $a = -0.092519 + 0.562280I$ $b = -0.754878$	$1.91067 - 2.82812I$	$-16.7346 + 3.8621I$
$u = 0.754878$ $a = 1.53980 + 1.30714I$ $b = 0.877439 + 0.744862I$	$1.91067 - 2.82812I$	$-12.8076 + 6.7630I$
$u = 0.754878$ $a = 1.53980 - 1.30714I$ $b = 0.877439 - 0.744862I$	$1.91067 + 2.82812I$	$-12.8076 - 6.7630I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_4	$((u^3 - u^2 + 2u - 1)^3)(u^{75} + 18u^{74} + \cdots + 21u + 1)$
c_2	$((u^3 + u^2 - 1)^3)(u^{75} + 4u^{74} + \cdots + 5u + 1)$
c_3, c_9	$u^9(u^{75} + u^{74} + \cdots + 2048u + 512)$
c_5	$((u^3 - u^2 + 1)^3)(u^{75} + 4u^{74} + \cdots + 5u + 1)$
c_6	$((u^3 + u^2 + 2u + 1)^3)(u^{75} + 18u^{74} + \cdots + 21u + 1)$
c_7	$((u^3 + u^2 - 1)^3)(u^{75} + 4u^{74} + \cdots - 4485u + 1153)$
c_8	$((u^3 - u^2 + 2u - 1)^3)(u^{75} - 4u^{74} + \cdots - 3u + 1)$
c_{10}	$((u^3 + u^2 - 1)^3)(u^{75} - 14u^{74} + \cdots - 2323u + 1251)$
c_{11}, c_{12}	$((u^3 + u^2 + 2u + 1)^3)(u^{75} - 4u^{74} + \cdots - 3u + 1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4, c_6	$((y^3+3y^2+2y-1)^3)(y^{75}+82y^{74}+\cdots+197y-1)$
c_2, c_5	$((y^3-y^2+2y-1)^3)(y^{75}-18y^{74}+\cdots+21y-1)$
c_3, c_9	$y^9(y^{75}+49y^{74}+\cdots-4325376y-262144)$
c_7	$((y^3-y^2+2y-1)^3)(y^{75}+14y^{74}+\cdots+3138453y-1329409)$
c_8, c_{11}, c_{12}	$((y^3+3y^2+2y-1)^3)(y^{75}+70y^{74}+\cdots+29y-1)$
c_{10}	$((y^3-y^2+2y-1)^3)(y^{75}+42y^{74}+\cdots-3150503y-1565001)$