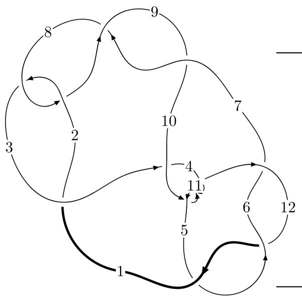
$12a_{0767}$ $(K12a_{0767})$



A knot diagram[1]

Linearized knot diagam

3 8 10 11 1 12 9 2 7 5 4 6

Solving Sequence

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

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

$$I_1^u = \langle 2u^{25} + 3u^{24} + \cdots + b - 3,\ 3u^{26} + 9u^{25} + \cdots + 2a - 9,\ u^{27} + 3u^{26} + \cdots + u - 2\rangle$$
$$I_2^u = \langle 21u^{19}a + 223u^{19} + \cdots - 81a - 318,\ -2u^{19}a + u^{19} + \cdots + a^2 - 3,\ u^{20} - u^{19} + \cdots + u^2 + 1\rangle$$
$$I_3^u = \langle -u^5 + b - u,\ -u^4 - u^2 + a + u - 2,\ u^6 + u^4 + 2u^2 + 1\rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 73 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.

$$\boldsymbol{I_1^u = \langle 2u^{25}+3u^{24}+\cdots+b-3,\ 3u^{26}+9u^{25}+\cdots+2a-9,\ u^{27}+3u^{26}+\cdots+u-2\rangle}$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5+u^3+u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -\frac{3}{2}u^{26}-\frac{9}{2}u^{25}+\cdots-4u+\frac{9}{2} \\ -2u^{25}-3u^{24}+\cdots-5u+3 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -\frac{7}{2}u^{26}-\frac{21}{2}u^{25}+\cdots-8u+\frac{17}{2} \\ -5u^{25}-7u^{24}+\cdots-12u+7 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} u^4+u^2+1 \\ u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{11}-2u^9-4u^7-4u^5-3u^3 \\ -u^{11}-u^9-2u^7-u^5+u^3+u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -\frac{3}{2}u^{26}-\frac{5}{2}u^{25}+\cdots+2u+\frac{1}{2} \\ -u^{26}-2u^{25}+\cdots+u+1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u^{26}+\frac{1}{2}u^{25}+\cdots+\frac{1}{2}u^2+\frac{1}{2} \\ u^{26}+2u^{25}+\cdots+u-1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{26}-10u^{25}-26u^{24}-38u^{23}-78u^{22}-106u^{21}-180u^{20}-202u^{19}-298u^{18}-286u^{17}-366u^{16}-274u^{15}-332u^{14}-172u^{13}-200u^{12}-10u^{11}-70u^{10}+84u^9-18u^8+58u^7-62u^6+10u^5-52u^4+6u^3-18u^2+14u-10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$u^{27} + 7u^{26} + \cdots - 7u - 4$
c_2, c_8	$u^{27} - 3u^{26} + \cdots + u + 2$
c_3	$u^{27} - 3u^{26} + \cdots + 192u + 128$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$u^{27} + 15u^{25} + \cdots + 3u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$y^{27} + 27y^{26} + \cdots + 385y - 16$
c_2, c_8	$y^{27} + 7y^{26} + \cdots - 7y - 4$
c_3	$y^{27} + y^{26} + \cdots - 323584y - 16384$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$y^{27} + 30y^{26} + \cdots - 7y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.277460 + 0.929850I$ $a = -0.226509 + 0.100294I$ $b = -0.350781 + 0.505562I$	$-3.57952 + 2.60716I$	$-14.9352 - 5.3810I$
$u = 0.277460 - 0.929850I$ $a = -0.226509 - 0.100294I$ $b = -0.350781 - 0.505562I$	$-3.57952 - 2.60716I$	$-14.9352 + 5.3810I$
$u = 0.126747 + 1.039010I$ $a = 1.75601 + 0.00499I$ $b = -0.485752 + 0.316127I$	$4.48046 - 3.61631I$	$-5.50483 + 2.14074I$
$u = 0.126747 - 1.039010I$ $a = 1.75601 - 0.00499I$ $b = -0.485752 - 0.316127I$	$4.48046 + 3.61631I$	$-5.50483 - 2.14074I$
$u = -0.752094 + 0.565194I$ $a = -0.248696 + 0.216030I$ $b = 1.22743 + 0.73470I$	$10.36450 - 3.20982I$	$1.89568 + 3.18066I$
$u = -0.752094 - 0.565194I$ $a = -0.248696 - 0.216030I$ $b = 1.22743 - 0.73470I$	$10.36450 + 3.20982I$	$1.89568 - 3.18066I$
$u = 0.387921 + 1.022180I$ $a = -0.396664 + 1.123690I$ $b = -0.35306 - 1.73889I$	$6.03730 + 9.94630I$	$-4.12408 - 8.16397I$
$u = 0.387921 - 1.022180I$ $a = -0.396664 - 1.123690I$ $b = -0.35306 + 1.73889I$	$6.03730 - 9.94630I$	$-4.12408 + 8.16397I$
$u = -0.827337 + 0.833435I$ $a = 0.269864 - 1.251390I$ $b = -0.725756 - 0.997287I$	$3.30382 + 0.39142I$	$-7.35863 - 2.13067I$
$u = -0.827337 - 0.833435I$ $a = 0.269864 + 1.251390I$ $b = -0.725756 + 0.997287I$	$3.30382 - 0.39142I$	$-7.35863 + 2.13067I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.649915+0.979302I$ $a=-0.176933-0.959042I$ $b=-0.517512+0.774284I$	$9.15980-1.98047I$	$0.08290+2.09302I$
$u=-0.649915-0.979302I$ $a=-0.176933+0.959042I$ $b=-0.517512-0.774284I$	$9.15980+1.98047I$	$0.08290-2.09302I$
$u=0.780493+0.883681I$ $a=0.480688+0.900878I$ $b=-0.045523+0.725234I$	$4.69939+2.93735I$	$-5.31916-3.32522I$
$u=0.780493-0.883681I$ $a=0.480688-0.900878I$ $b=-0.045523-0.725234I$	$4.69939-2.93735I$	$-5.31916+3.32522I$
$u=-0.899672+0.815653I$ $a=-0.58148+3.00390I$ $b=1.13268+3.45473I$	$14.5319+8.1806I$	$0.62316-3.31406I$
$u=-0.899672-0.815653I$ $a=-0.58148-3.00390I$ $b=1.13268-3.45473I$	$14.5319-8.1806I$	$0.62316+3.31406I$
$u=-0.794071+0.949068I$ $a=1.009610-0.549638I$ $b=0.536925-1.276200I$	$2.94749-6.45639I$	$-8.12410+6.99903I$
$u=-0.794071-0.949068I$ $a=1.009610+0.549638I$ $b=0.536925+1.276200I$	$2.94749+6.45639I$	$-8.12410-6.99903I$
$u=0.724841+0.204931I$ $a=-0.333556-1.065420I$ $b=1.20442-1.15144I$	$8.67788-5.98718I$	$1.18729+3.50832I$
$u=0.724841-0.204931I$ $a=-0.333556+1.065420I$ $b=1.20442+1.15144I$	$8.67788+5.98718I$	$1.18729-3.50832I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.884876 + 0.922327I$ $a = -2.17724 - 2.75480I$ $b = 0.33580 - 4.16119I$	$19.2754 + 3.2655I$	$2.41004 - 2.43597I$
$u = 0.884876 - 0.922327I$ $a = -2.17724 + 2.75480I$ $b = 0.33580 + 4.16119I$	$19.2754 - 3.2655I$	$2.41004 + 2.43597I$
$u = -0.823258 + 0.994644I$ $a = -3.10389 + 1.52970I$ $b = -0.65697 + 3.62118I$	$13.9657 - 14.5534I$	$-0.35354 + 8.08275I$
$u = -0.823258 - 0.994644I$ $a = -3.10389 - 1.52970I$ $b = -0.65697 - 3.62118I$	$13.9657 + 14.5534I$	$-0.35354 - 8.08275I$
$u = -0.168845 + 0.630303I$ $a = 0.528148 - 0.293642I$ $b = -0.263129 - 0.261083I$	$-0.403036 - 0.836917I$	$-8.78276 + 7.97359I$
$u = -0.168845 - 0.630303I$ $a = 0.528148 + 0.293642I$ $b = -0.263129 + 0.261083I$	$-0.403036 + 0.836917I$	$-8.78276 - 7.97359I$
$u = 0.465710$ $a = 0.901293$ $b = -0.0775306$	-1.04458	-9.39350

II. $\boldsymbol{I_2^u = \langle 21u^{19}a + 223u^{19} + \cdots - 81a - 318,\ -2u^{19}a + u^{19} + \cdots + a^2 - 3,\ u^{20} - u^{19} + \cdots + u^2 + 1\rangle}$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} a \\ -0.0830040au^{19} - 0.881423u^{19} + \cdots + 0.320158a + 1.25692 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.0750988au^{19} - 1.03557u^{19} + \cdots + 1.00395a + 0.422925 \\ 0.573123au^{19} - 1.67589u^{19} + \cdots + 0.0750988a + 2.03557 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{11} - 2u^9 - 4u^7 - 4u^5 - 3u^3 \\ -u^{11} - u^9 - 2u^7 - u^5 + u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.320158au^{19} + 1.25692u^{19} + \cdots - 0.806324a - 0.276680 \\ -0.422925au^{19} - 0.252964u^{19} + \cdots - 0.0830040a - 0.881423 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.320158au^{19} + 1.25692u^{19} + \cdots - 0.806324a + 0.723320 \\ 0.150198au^{19} + 0.0711462u^{19} + \cdots - 0.00790514a - 0.845850 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{19} - 8u^{17} - 4u^{16} - 28u^{15} - 8u^{14} - 40u^{13} - 24u^{12} - 64u^{11} - 36u^{10} - 64u^9 - 44u^8 - 60u^7 - 44u^6 - 36u^5 - 24u^4 - 24u^3 - 8u^2 - 8u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_7, c_9	$(u^{20} + 5u^{19} + \cdots + 2u + 1)^2$
c_2, c_8	$(u^{20} + u^{19} + \cdots + u^2 + 1)^2$
c_3	$(u^{20} + u^{19} + \cdots + 4u + 1)^2$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$u^{40} + u^{39} + \cdots + 6u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$(y^{20} + 21y^{19} + \cdots + 10y + 1)^2$
c_2, c_8	$(y^{20} + 5y^{19} + \cdots + 2y + 1)^2$
c_3	$(y^{20} + y^{19} + \cdots + 18y + 1)^2$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$y^{40} + 31y^{39} + \cdots + 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.362805 + 0.953641I$ $a = -0.473240 - 1.154840I$ $b = -0.17255 + 1.80829I$	$0.79812 - 6.06247I$	$-8.39660 + 7.82928I$
$u = -0.362805 + 0.953641I$ $a = -0.462437 - 0.239841I$ $b = -0.323095 - 0.392131I$	$0.79812 - 6.06247I$	$-8.39660 + 7.82928I$
$u = -0.362805 - 0.953641I$ $a = -0.473240 + 1.154840I$ $b = -0.17255 - 1.80829I$	$0.79812 + 6.06247I$	$-8.39660 - 7.82928I$
$u = -0.362805 - 0.953641I$ $a = -0.462437 + 0.239841I$ $b = -0.323095 + 0.392131I$	$0.79812 + 6.06247I$	$-8.39660 - 7.82928I$
$u = -0.161278 + 0.924181I$ $a = 1.76129 + 0.00175I$ $b = -0.207836 - 0.314442I$	$-0.345495 + 0.748059I$	$-11.88926 - 0.17223I$
$u = -0.161278 + 0.924181I$ $a = 0.0174489 + 0.1253060I$ $b = -0.507066 - 0.616738I$	$-0.345495 + 0.748059I$	$-11.88926 - 0.17223I$
$u = -0.161278 - 0.924181I$ $a = 1.76129 - 0.00175I$ $b = -0.207836 + 0.314442I$	$-0.345495 - 0.748059I$	$-11.88926 + 0.17223I$
$u = -0.161278 - 0.924181I$ $a = 0.0174489 - 0.1253060I$ $b = -0.507066 + 0.616738I$	$-0.345495 - 0.748059I$	$-11.88926 + 0.17223I$
$u = 0.351156 + 0.820236I$ $a = -0.804851 + 1.144580I$ $b = 0.34299 - 1.91217I$	$2.95992 + 1.83292I$	$-4.44386 - 4.26331I$
$u = 0.351156 + 0.820236I$ $a = 1.80458 - 0.05939I$ $b = 0.204203 + 0.494473I$	$2.95992 + 1.83292I$	$-4.44386 - 4.26331I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.351156 - 0.820236I$ $a = -0.804851 - 1.144580I$ $b = 0.34299 + 1.91217I$	$2.95992 - 1.83292I$	$-4.44386 + 4.26331I$
$u = 0.351156 - 0.820236I$ $a = 1.80458 + 0.05939I$ $b = 0.204203 - 0.494473I$	$2.95992 - 1.83292I$	$-4.44386 + 4.26331I$
$u = 0.765553 + 0.891086I$ $a = 0.208269 + 0.849702I$ $b = -0.170011 + 0.227981I$	$4.71375 + 2.89577I$	$-6.31229 - 2.74717I$
$u = 0.765553 + 0.891086I$ $a = 0.745886 + 1.016220I$ $b = -0.004581 + 1.103120I$	$4.71375 + 2.89577I$	$-6.31229 - 2.74717I$
$u = 0.765553 - 0.891086I$ $a = 0.208269 - 0.849702I$ $b = -0.170011 - 0.227981I$	$4.71375 - 2.89577I$	$-6.31229 + 2.74717I$
$u = 0.765553 - 0.891086I$ $a = 0.745886 - 1.016220I$ $b = -0.004581 - 1.103120I$	$4.71375 - 2.89577I$	$-6.31229 + 2.74717I$
$u = 0.872273 + 0.832901I$ $a = 0.216187 + 1.258090I$ $b = -0.909321 + 1.037960I$	$8.70951 - 3.75485I$	$-2.25682 + 2.44199I$
$u = 0.872273 + 0.832901I$ $a = -0.72234 - 3.52789I$ $b = 1.39922 - 3.79149I$	$8.70951 - 3.75485I$	$-2.25682 + 2.44199I$
$u = 0.872273 - 0.832901I$ $a = 0.216187 - 1.258090I$ $b = -0.909321 - 1.037960I$	$8.70951 + 3.75485I$	$-2.25682 - 2.44199I$
$u = 0.872273 - 0.832901I$ $a = -0.72234 + 3.52789I$ $b = 1.39922 + 3.79149I$	$8.70951 + 3.75485I$	$-2.25682 - 2.44199I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.857922 + 0.867417I$ $a = 0.583226 - 0.288576I$ $b = 0.935046 - 0.649367I$	$10.37890 - 1.55876I$	$0.11661 + 2.37917I$
$u = -0.857922 + 0.867417I$ $a = -1.53336 + 3.87998I$ $b = 1.18542 + 4.43172I$	$10.37890 - 1.55876I$	$0.11661 + 2.37917I$
$u = -0.857922 - 0.867417I$ $a = 0.583226 + 0.288576I$ $b = 0.935046 + 0.649367I$	$10.37890 + 1.55876I$	$0.11661 - 2.37917I$
$u = -0.857922 - 0.867417I$ $a = -1.53336 - 3.87998I$ $b = 1.18542 - 4.43172I$	$10.37890 + 1.55876I$	$0.11661 - 2.37917I$
$u = -0.828456 + 0.942427I$ $a = 0.115226 - 1.123400I$ $b = -0.965278 - 0.339588I$	$10.14230 - 4.70967I$	$-0.36261 + 2.80351I$
$u = -0.828456 + 0.942427I$ $a = -3.47576 + 2.62759I$ $b = -0.50717 + 4.57832I$	$10.14230 - 4.70967I$	$-0.36261 + 2.80351I$
$u = -0.828456 - 0.942427I$ $a = 0.115226 + 1.123400I$ $b = -0.965278 + 0.339588I$	$10.14230 + 4.70967I$	$-0.36261 - 2.80351I$
$u = -0.828456 - 0.942427I$ $a = -3.47576 - 2.62759I$ $b = -0.50717 - 4.57832I$	$10.14230 + 4.70967I$	$-0.36261 - 2.80351I$
$u = 0.818606 + 0.971044I$ $a = 1.029030 + 0.400942I$ $b = 0.70511 + 1.34475I$	$8.27570 + 10.03250I$	$-3.16919 - 7.28178I$
$u = 0.818606 + 0.971044I$ $a = -3.45786 - 1.83520I$ $b = -0.82034 - 4.00237I$	$8.27570 + 10.03250I$	$-3.16919 - 7.28178I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.818606-0.971044I$ $a = 1.029030-0.400942I$ $b = 0.70511-1.34475I$	$8.27570-10.03250I$	$-3.16919+7.28178I$
$u = 0.818606-0.971044I$ $a = -3.45786+1.83520I$ $b = -0.82034+4.00237I$	$8.27570-10.03250I$	$-3.16919+7.28178I$
$u = 0.483351+0.483677I$ $a = -1.169990-0.258941I$ $b = 1.22095-1.10150I$	$3.96963+1.37271I$	$-0.87985-4.43993I$
$u = 0.483351+0.483677I$ $a = 0.440357+1.167290I$ $b = -0.006838+0.783868I$	$3.96963+1.37271I$	$-0.87985-4.43993I$
$u = 0.483351-0.483677I$ $a = -1.169990+0.258941I$ $b = 1.22095+1.10150I$	$3.96963-1.37271I$	$-0.87985+4.43993I$
$u = 0.483351-0.483677I$ $a = 0.440357-1.167290I$ $b = -0.006838-0.783868I$	$3.96963-1.37271I$	$-0.87985+4.43993I$
$u = -0.580477+0.222282I$ $a = 0.879103+0.241455I$ $b = -0.061684+0.219008I$	$3.03554+2.59904I$	$-2.40613-3.16627I$
$u = -0.580477+0.222282I$ $a = -0.700755+1.190060I$ $b = 1.16284+1.01300I$	$3.03554+2.59904I$	$-2.40613-3.16627I$
$u = -0.580477-0.222282I$ $a = 0.879103-0.241455I$ $b = -0.061684-0.219008I$	$3.03554-2.59904I$	$-2.40613+3.16627I$
$u = -0.580477-0.222282I$ $a = -0.700755-1.190060I$ $b = 1.16284-1.01300I$	$3.03554-2.59904I$	$-2.40613+3.16627I$

III. $I^u_3 = \langle -u^5 + b - u,\ -u^4 - u^2 + a + u - 2,\ u^6 + u^4 + 2u^2 + 1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^4 + u^2 - u + 2 \\ u^5 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^4 - u + 1 \\ u^5 - u^2 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^5 + u^4 + u^3 + u^2 + 2u + 1 \\ u^5 + u^3 + u - 1 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u^5 + 2u^4 + u^3 + 2u^2 + 2u + 2 \\ u^5 + u^4 + u^3 + u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.744862 + 0.877439I$ $a = -0.622301 - 0.132577I$ $b = -1.000000I$	$6.31400 + 2.82812I$	$-0.49024 - 2.97945I$
$u = 0.744862 - 0.877439I$ $a = -0.622301 + 0.132577I$ $b = 1.000000I$	$6.31400 - 2.82812I$	$-0.49024 + 2.97945I$
$u = -0.744862 + 0.877439I$ $a = 0.86742 - 1.62230I$ $b = -1.000000I$	$6.31400 - 2.82812I$	$-0.49024 + 2.97945I$
$u = -0.744862 - 0.877439I$ $a = 0.86742 + 1.62230I$ $b = 1.000000I$	$6.31400 + 2.82812I$	$-0.49024 - 2.97945I$
$u = 0.754878I$ $a = 1.75488 - 0.75488I$ $b = 1.000000I$	2.17641	-7.01950
$u = -0.754878I$ $a = 1.75488 + 0.75488I$ $b = -1.000000I$	2.17641	-7.01950

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_7	$((u^3-u^2+2u-1)^2)(u^{20}+5u^{19}+\cdots+2u+1)^2$ $\cdot(u^{27}+7u^{26}+\cdots-7u-4)$
c_2, c_8	$(u^6+u^4+2u^2+1)(u^{20}+u^{19}+\cdots+u^2+1)^2(u^{27}-3u^{26}+\cdots+u+2)$
c_3	$u^6(u^{20}+u^{19}+\cdots+4u+1)^2(u^{27}-3u^{26}+\cdots+192u+128)$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$((u^2+1)^3)(u^{27}+15u^{25}+\cdots+3u+1)(u^{40}+u^{39}+\cdots+6u+1)$
c_9	$((u^3+u^2+2u+1)^2)(u^{20}+5u^{19}+\cdots+2u+1)^2$ $\cdot(u^{27}+7u^{26}+\cdots-7u-4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_7, c_9	$((y^3+3y^2+2y-1)^2)(y^{20}+21y^{19}+\cdots+10y+1)^2$ $\cdot(y^{27}+27y^{26}+\cdots+385y-16)$
c_2, c_8	$((y^3+y^2+2y+1)^2)(y^{20}+5y^{19}+\cdots+2y+1)^2$ $\cdot(y^{27}+7y^{26}+\cdots-7y-4)$
c_3	$y^6(y^{20}+y^{19}+\cdots+18y+1)^2(y^{27}+y^{26}+\cdots-323584y-16384)$
c_4, c_5, c_6 c_{10}, c_{11}, c_{12}	$((y+1)^6)(y^{27}+30y^{26}+\cdots-7y-1)(y^{40}+31y^{39}+\cdots+16y+1)$