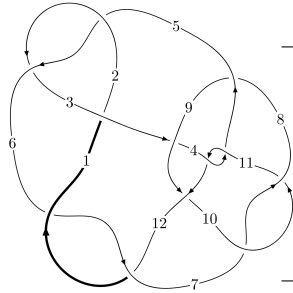
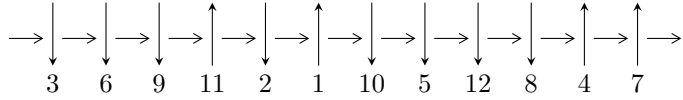


12a₀₃₉₈ (K12a₀₃₉₈)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -4.97226 \times 10^{50} u^{97} + 4.65765 \times 10^{50} u^{96} + \dots + 9.94685 \times 10^{49} b + 3.19075 \times 10^{50}, \\ 7.33977 \times 10^{49} u^{97} - 8.07721 \times 10^{49} u^{96} + \dots + 2.98406 \times 10^{50} a + 7.44119 \times 10^{50}, u^{98} - 2u^{97} + \dots - 5u + 1 \rangle$$

$$I_2^u = \langle 5u^5 - 3u^4 - 7u^3 + 8u^2 + 17b + 11u + 1, 4u^5 - 16u^4 - 26u^3 + 20u^2 + 17a + 19u - 6, \\ u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I.

$$I_1^u = \langle -4.97 \times 10^{50} u^{97} + 4.66 \times 10^{50} u^{96} + \dots + 9.95 \times 10^{49} b + 3.19 \times 10^{50}, 7.34 \times 10^{49} u^{97} - 8.08 \times 10^{49} u^{96} + \dots + 2.98 \times 10^{50} a + 7.44 \times 10^{50}, u^{98} - 2u^{97} + \dots - 5u + 1 \rangle$$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

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

$$a_{10} = \begin{pmatrix} -0.245966u^{97} + 0.270679u^{96} + \dots - 0.544659u - 2.49365 \\ 4.99882u^{97} - 4.68254u^{96} + \dots + 17.2389u - 3.20780 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.293712u^{97} - 0.601992u^{96} + \dots + 4.46853u - 2.86203 \\ 4.85358u^{97} - 4.20830u^{96} + \dots + 16.6402u - 2.74961 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.979346u^{97} + 1.70885u^{96} + \dots - 8.77351u + 0.791545 \\ 0.216714u^{97} - 0.560914u^{96} + \dots + 0.966260u - 0.417735 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2.87151u^{97} - 2.46999u^{96} + \dots + 7.08329u - 1.86426 \\ -0.626345u^{97} + 0.422548u^{96} + \dots - 3.41997u + 1.08263 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^8 + 3u^6 - 3u^4 + 1 \\ -u^8 + 2u^6 - 2u^4 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -5.41930u^{97} + 6.52843u^{96} + \dots - 21.8687u + 3.43085 \\ 1.32970u^{97} - 1.22300u^{96} + \dots + 6.06795u - 0.752344 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $1.95346u^{97} + 1.64120u^{96} + \dots - 1.69682u - 8.13481$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{98} + 54u^{97} + \dots + 15u + 1$
c_2, c_5	$u^{98} + 2u^{97} + \dots + 5u + 1$
c_3	$u^{98} - u^{97} + \dots + 56576u - 18496$
c_4, c_{11}	$u^{98} - 2u^{97} + \dots + u + 1$
c_6, c_{12}	$u^{98} + 6u^{97} + \dots - 585u - 117$
c_7, c_{10}	$u^{98} - 7u^{97} + \dots - 1854u - 289$
c_8	$17(17u^{98} + 153u^{97} + \dots - 1.14403 \times 10^7 u - 3023343)$
c_9	$17(17u^{98} - 17u^{97} + \dots - 1.64298 \times 10^7 u + 5717884)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{98} - 18y^{97} + \dots - 63y + 1$
c_2, c_5	$y^{98} - 54y^{97} + \dots - 15y + 1$
c_3	$y^{98} - 39y^{97} + \dots - 8090890240y + 342102016$
c_4, c_{11}	$y^{98} + 66y^{97} + \dots - 15y + 1$
c_6, c_{12}	$y^{98} + 90y^{97} + \dots - 361179y + 13689$
c_7, c_{10}	$y^{98} - 85y^{97} + \dots - 453680y + 83521$
c_8	289 $\cdot (289y^{98} - 16167y^{97} + \dots + 80567110376298y + 9140602895649)$
c_9	289 $\cdot (289y^{98} - 19669y^{97} + \dots + 565449262390916y + 32694197437456)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.880926 + 0.484109I$ $a = 0.126645 - 0.916864I$ $b = 0.660952 - 0.142781I$	$1.31774 + 3.33830I$	0
$u = -0.880926 - 0.484109I$ $a = 0.126645 + 0.916864I$ $b = 0.660952 + 0.142781I$	$1.31774 - 3.33830I$	0
$u = 0.974373 + 0.252627I$ $a = -1.27667 + 1.42712I$ $b = -0.022307 + 0.871202I$	$-7.11570 - 0.67586I$	0
$u = 0.974373 - 0.252627I$ $a = -1.27667 - 1.42712I$ $b = -0.022307 - 0.871202I$	$-7.11570 + 0.67586I$	0
$u = 0.910945 + 0.373274I$ $a = -0.256402 + 0.534880I$ $b = -0.98712 + 1.06488I$	$-2.23448 - 2.92840I$	0
$u = 0.910945 - 0.373274I$ $a = -0.256402 - 0.534880I$ $b = -0.98712 - 1.06488I$	$-2.23448 + 2.92840I$	0
$u = 0.896075 + 0.389212I$ $a = 0.023671 - 0.586188I$ $b = 0.303646 + 0.530745I$	$-2.08514 - 1.28187I$	0
$u = 0.896075 - 0.389212I$ $a = 0.023671 + 0.586188I$ $b = 0.303646 - 0.530745I$	$-2.08514 + 1.28187I$	0
$u = 0.928346 + 0.477510I$ $a = -0.559370 - 0.935941I$ $b = -1.231390 + 0.023809I$	$-1.86670 - 6.95902I$	0
$u = 0.928346 - 0.477510I$ $a = -0.559370 + 0.935941I$ $b = -1.231390 - 0.023809I$	$-1.86670 + 6.95902I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.974953 + 0.377265I$ $a = 1.247520 + 0.361901I$ $b = 1.09051 + 1.21557I$	$-6.26927 + 4.49763I$	0
$u = -0.974953 - 0.377265I$ $a = 1.247520 - 0.361901I$ $b = 1.09051 - 1.21557I$	$-6.26927 - 4.49763I$	0
$u = -0.941732 + 0.075068I$ $a = 0.495249 + 1.108090I$ $b = -0.774952 + 0.155770I$	$-4.44083 - 2.39547I$	$-13.30877 + 3.50221I$
$u = -0.941732 - 0.075068I$ $a = 0.495249 - 1.108090I$ $b = -0.774952 - 0.155770I$	$-4.44083 + 2.39547I$	$-13.30877 - 3.50221I$
$u = -0.885013 + 0.279903I$ $a = 1.29645 + 1.65611I$ $b = 0.652790 - 0.030084I$	$-2.90514 + 1.19408I$	$-2.29836 - 6.69725I$
$u = -0.885013 - 0.279903I$ $a = 1.29645 - 1.65611I$ $b = 0.652790 + 0.030084I$	$-2.90514 - 1.19408I$	$-2.29836 + 6.69725I$
$u = -0.524530 + 0.732654I$ $a = -2.08618 - 0.70829I$ $b = -0.761115 - 0.376453I$	$-0.232117 - 1.390560I$	$-11.31130 + 4.29351I$
$u = -0.524530 - 0.732654I$ $a = -2.08618 + 0.70829I$ $b = -0.761115 + 0.376453I$	$-0.232117 + 1.390560I$	$-11.31130 - 4.29351I$
$u = 0.132548 + 0.884447I$ $a = 0.03160 + 2.92347I$ $b = -0.19165 + 2.64383I$	$-10.92230 + 0.52550I$	$-11.49902 + 0.I$
$u = 0.132548 - 0.884447I$ $a = 0.03160 - 2.92347I$ $b = -0.19165 - 2.64383I$	$-10.92230 - 0.52550I$	$-11.49902 + 0.I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.114489 + 0.882090I$ $a = 0.04997 + 3.38096I$ $b = 0.12413 + 3.03122I$	$-6.80651 - 6.89016I$	$-7.34704 + 4.74828I$
$u = -0.114489 - 0.882090I$ $a = 0.04997 - 3.38096I$ $b = 0.12413 - 3.03122I$	$-6.80651 + 6.89016I$	$-7.34704 - 4.74828I$
$u = 0.570229 + 0.676931I$ $a = 1.98999 - 0.86975I$ $b = 0.551409 - 0.736236I$	$-5.07076 - 5.29668I$	$-8.08754 + 5.87006I$
$u = 0.570229 - 0.676931I$ $a = 1.98999 + 0.86975I$ $b = 0.551409 + 0.736236I$	$-5.07076 + 5.29668I$	$-8.08754 - 5.87006I$
$u = 0.940783 + 0.607358I$ $a = -0.10800 - 1.77166I$ $b = -0.456724 - 1.138880I$	$-6.12867 + 0.37150I$	0
$u = 0.940783 - 0.607358I$ $a = -0.10800 + 1.77166I$ $b = -0.456724 + 1.138880I$	$-6.12867 - 0.37150I$	0
$u = 0.115348 + 0.872168I$ $a = -0.27789 + 3.51102I$ $b = -0.26189 + 3.22218I$	$-11.5464 + 12.6491I$	$-9.04777 - 6.24200I$
$u = 0.115348 - 0.872168I$ $a = -0.27789 - 3.51102I$ $b = -0.26189 - 3.22218I$	$-11.5464 - 12.6491I$	$-9.04777 + 6.24200I$
$u = 1.063950 + 0.366915I$ $a = -0.304479 - 0.401019I$ $b = 0.338645 + 0.700284I$	$-2.32999 - 1.10892I$	0
$u = 1.063950 - 0.366915I$ $a = -0.304479 + 0.401019I$ $b = 0.338645 - 0.700284I$	$-2.32999 + 1.10892I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.971094 + 0.573545I$ $a = -0.24373 - 1.46327I$ $b = 0.025972 - 0.871201I$	$-6.69265 - 12.33470I$	0
$u = 0.971094 - 0.573545I$ $a = -0.24373 + 1.46327I$ $b = 0.025972 + 0.871201I$	$-6.69265 + 12.33470I$	0
$u = -0.767801 + 0.352606I$ $a = 1.39070 - 2.44592I$ $b = -2.58577 + 0.72091I$	$-3.63016 + 1.65900I$	$3.9072 + 23.8478I$
$u = -0.767801 - 0.352606I$ $a = 1.39070 + 2.44592I$ $b = -2.58577 - 0.72091I$	$-3.63016 - 1.65900I$	$3.9072 - 23.8478I$
$u = 0.505693 + 0.675692I$ $a = 1.75333 - 0.84172I$ $b = 0.329537 - 0.231538I$	$-5.35571 + 7.53889I$	$-6.81727 - 4.67967I$
$u = 0.505693 - 0.675692I$ $a = 1.75333 + 0.84172I$ $b = 0.329537 + 0.231538I$	$-5.35571 - 7.53889I$	$-6.81727 + 4.67967I$
$u = -0.993504 + 0.600088I$ $a = 0.47368 - 1.64849I$ $b = 0.411373 - 0.745032I$	$-1.61839 + 6.44486I$	0
$u = -0.993504 - 0.600088I$ $a = 0.47368 + 1.64849I$ $b = 0.411373 + 0.745032I$	$-1.61839 - 6.44486I$	0
$u = -1.166400 + 0.018886I$ $a = -0.966641 - 0.179200I$ $b = -1.63225 + 0.12018I$	$-10.79030 - 6.22673I$	0
$u = -1.166400 - 0.018886I$ $a = -0.966641 + 0.179200I$ $b = -1.63225 - 0.12018I$	$-10.79030 + 6.22673I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.021273 + 0.831652I$ $a = -0.24180 - 2.58464I$ $b = 0.05445 - 2.72408I$	$-9.90385 - 2.44635I$	$-13.17692 + 2.77402I$
$u = -0.021273 - 0.831652I$ $a = -0.24180 + 2.58464I$ $b = 0.05445 + 2.72408I$	$-9.90385 + 2.44635I$	$-13.17692 - 2.77402I$
$u = 0.070842 + 0.823509I$ $a = -0.007588 - 0.526508I$ $b = -0.548057 - 0.671649I$	$-5.66868 + 6.21673I$	$-8.53340 - 6.01973I$
$u = 0.070842 - 0.823509I$ $a = -0.007588 + 0.526508I$ $b = -0.548057 + 0.671649I$	$-5.66868 - 6.21673I$	$-8.53340 + 6.01973I$
$u = 1.19235$ $a = 0.890389$ $b = 1.79996$	-6.07258	0
$u = 0.017029 + 0.804914I$ $a = 1.57818 - 3.43781I$ $b = 1.11105 - 3.17459I$	$-5.21434 + 1.19168I$	$-4.90066 - 0.65015I$
$u = 0.017029 - 0.804914I$ $a = 1.57818 + 3.43781I$ $b = 1.11105 + 3.17459I$	$-5.21434 - 1.19168I$	$-4.90066 + 0.65015I$
$u = -0.074672 + 0.797417I$ $a = -0.635672 + 0.075350I$ $b = -0.136067 - 0.093287I$	$-1.97377 - 2.83777I$	$-2.36877 + 3.16295I$
$u = -0.074672 - 0.797417I$ $a = -0.635672 - 0.075350I$ $b = -0.136067 + 0.093287I$	$-1.97377 + 2.83777I$	$-2.36877 - 3.16295I$
$u = -1.089280 + 0.516766I$ $a = 0.907969 - 0.774653I$ $b = 0.321369 + 0.406554I$	$-1.16942 + 6.00915I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.089280 - 0.516766I$ $a = 0.907969 + 0.774653I$ $b = 0.321369 - 0.406554I$	$-1.16942 - 6.00915I$	0
$u = -0.621107 + 0.492354I$ $a = -0.987856 - 0.165809I$ $b = -0.583250 - 0.432942I$	$2.05741 + 0.72072I$	$3.28663 - 2.76170I$
$u = -0.621107 - 0.492354I$ $a = -0.987856 + 0.165809I$ $b = -0.583250 + 0.432942I$	$2.05741 - 0.72072I$	$3.28663 + 2.76170I$
$u = 0.043406 + 0.778257I$ $a = 2.60159 + 1.38272I$ $b = 1.97585 + 0.82291I$	$-4.92565 + 0.14811I$	$-9.73034 + 0.94835I$
$u = 0.043406 - 0.778257I$ $a = 2.60159 - 1.38272I$ $b = 1.97585 - 0.82291I$	$-4.92565 - 0.14811I$	$-9.73034 - 0.94835I$
$u = 0.720329 + 0.089531I$ $a = -0.844602 + 0.270082I$ $b = 0.691179 - 0.042911I$	$-1.241080 - 0.011716I$	$-6.07029 - 0.34761I$
$u = 0.720329 - 0.089531I$ $a = -0.844602 - 0.270082I$ $b = 0.691179 + 0.042911I$	$-1.241080 + 0.011716I$	$-6.07029 + 0.34761I$
$u = -1.204210 + 0.438433I$ $a = 0.48976 + 2.42963I$ $b = -2.48928 + 1.79555I$	$-8.55039 + 4.15005I$	0
$u = -1.204210 - 0.438433I$ $a = 0.48976 - 2.42963I$ $b = -2.48928 - 1.79555I$	$-8.55039 - 4.15005I$	0
$u = 1.211950 + 0.422374I$ $a = 0.343218 + 0.371608I$ $b = 0.395207 + 0.227767I$	$-5.76089 - 1.40580I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.211950 - 0.422374I$		
$a = 0.343218 - 0.371608I$	$-5.76089 + 1.40580I$	0
$b = 0.395207 - 0.227767I$		
$u = 1.202140 + 0.472702I$		
$a = -1.03696 - 1.68121I$	$-8.30327 - 4.69734I$	0
$b = -2.65062 + 0.27479I$		
$u = 1.202140 - 0.472702I$		
$a = -1.03696 + 1.68121I$	$-8.30327 + 4.69734I$	0
$b = -2.65062 - 0.27479I$		
$u = -1.226570 + 0.422161I$		
$a = -0.874333 - 0.195336I$	$-9.54621 - 1.87551I$	0
$b = 0.272608 - 0.498710I$		
$u = -1.226570 - 0.422161I$		
$a = -0.874333 + 0.195336I$	$-9.54621 + 1.87551I$	0
$b = 0.272608 + 0.498710I$		
$u = -1.216800 + 0.449987I$		
$a = -3.15860 + 0.95930I$	$-8.84908 + 3.27349I$	0
$b = -2.08390 - 3.33580I$		
$u = -1.216800 - 0.449987I$		
$a = -3.15860 - 0.95930I$	$-8.84908 - 3.27349I$	0
$b = -2.08390 + 3.33580I$		
$u = -1.205800 + 0.487033I$		
$a = 0.145777 - 0.154877I$	$-5.29805 + 7.52326I$	0
$b = 0.320462 - 0.390176I$		
$u = -1.205800 - 0.487033I$		
$a = 0.145777 + 0.154877I$	$-5.29805 - 7.52326I$	0
$b = 0.320462 + 0.390176I$		
$u = 1.215240 + 0.464812I$		
$a = 2.67705 - 1.24290I$	$-8.74284 - 5.75681I$	0
$b = -0.72754 - 4.01998I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.215240 - 0.464812I$ $a = 2.67705 + 1.24290I$ $b = -0.72754 + 4.01998I$	$-8.74284 + 5.75681I$	0
$u = 0.509463 + 0.476070I$ $a = 1.187850 + 0.624464I$ $b = 0.938899 - 0.329526I$	$-0.71896 + 2.95853I$	$-2.51194 - 3.48321I$
$u = 0.509463 - 0.476070I$ $a = 1.187850 - 0.624464I$ $b = 0.938899 + 0.329526I$	$-0.71896 - 2.95853I$	$-2.51194 + 3.48321I$
$u = 1.230060 + 0.448820I$ $a = 2.45870 + 0.09273I$ $b = 0.43578 - 2.81491I$	$-13.63800 - 2.09364I$	0
$u = 1.230060 - 0.448820I$ $a = 2.45870 - 0.09273I$ $b = 0.43578 + 2.81491I$	$-13.63800 + 2.09364I$	0
$u = 1.216000 + 0.489553I$ $a = 0.397355 + 0.396274I$ $b = 0.489408 - 0.959846I$	$-9.0634 - 10.9794I$	0
$u = 1.216000 - 0.489553I$ $a = 0.397355 - 0.396274I$ $b = 0.489408 + 0.959846I$	$-9.0634 + 10.9794I$	0
$u = -1.226390 + 0.469297I$ $a = -2.23969 - 0.06822I$ $b = -0.28701 - 3.14192I$	$-13.4906 + 7.1116I$	0
$u = -1.226390 - 0.469297I$ $a = -2.23969 + 0.06822I$ $b = -0.28701 + 3.14192I$	$-13.4906 - 7.1116I$	0
$u = -1.258840 + 0.392050I$ $a = 2.22949 - 0.20545I$ $b = 1.01592 + 3.37798I$	$-15.7926 - 8.2946I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.258840 - 0.392050I$ $a = 2.22949 + 0.20545I$ $b = 1.01592 - 3.37798I$	$-15.7926 + 8.2946I$	0
$u = -1.266160 + 0.381195I$ $a = 1.63607 - 0.12093I$ $b = 0.76801 + 2.93133I$	$-15.2825 + 3.8099I$	0
$u = -1.266160 - 0.381195I$ $a = 1.63607 + 0.12093I$ $b = 0.76801 - 2.93133I$	$-15.2825 - 3.8099I$	0
$u = 1.265500 + 0.392209I$ $a = -2.03627 - 0.02018I$ $b = -0.83587 + 3.28161I$	$-11.08980 + 2.49328I$	0
$u = 1.265500 - 0.392209I$ $a = -2.03627 + 0.02018I$ $b = -0.83587 - 3.28161I$	$-11.08980 - 2.49328I$	0
$u = -0.292512 + 0.607926I$ $a = -0.789378 + 0.092871I$ $b = -0.349256 + 0.518535I$	$1.06426 - 1.58419I$	$2.58444 + 3.77537I$
$u = -0.292512 - 0.607926I$ $a = -0.789378 - 0.092871I$ $b = -0.349256 - 0.518535I$	$1.06426 + 1.58419I$	$2.58444 - 3.77537I$
$u = 1.226290 + 0.517984I$ $a = -2.98532 + 0.98795I$ $b = -0.07289 + 3.70423I$	$-14.8832 - 17.6862I$	0
$u = 1.226290 - 0.517984I$ $a = -2.98532 - 0.98795I$ $b = -0.07289 - 3.70423I$	$-14.8832 + 17.6862I$	0
$u = -1.230600 + 0.519575I$ $a = 2.87770 + 0.84381I$ $b = 0.27887 + 3.44692I$	$-10.1682 + 11.9615I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.230600 - 0.519575I$ $a = 2.87770 - 0.84381I$ $b = 0.27887 - 3.44692I$	$-10.1682 - 11.9615I$	0
$u = 1.228630 + 0.527975I$ $a = -2.60513 + 0.78675I$ $b = -0.19145 + 2.92791I$	$-14.2246 - 5.6480I$	0
$u = 1.228630 - 0.527975I$ $a = -2.60513 - 0.78675I$ $b = -0.19145 - 2.92791I$	$-14.2246 + 5.6480I$	0
$u = 0.453345 + 0.432137I$ $a = 0.233685 - 0.550097I$ $b = 0.375198 + 0.493373I$	$-0.82753 - 2.22876I$	$-1.82904 + 3.38087I$
$u = 0.453345 - 0.432137I$ $a = 0.233685 + 0.550097I$ $b = 0.375198 - 0.493373I$	$-0.82753 + 2.22876I$	$-1.82904 - 3.38087I$
$u = -0.198026 + 0.372100I$ $a = 0.04825 + 3.22431I$ $b = -0.742638 + 0.704810I$	$-4.39769 - 1.30288I$	$-6.82606 + 0.92724I$
$u = -0.198026 - 0.372100I$ $a = 0.04825 - 3.22431I$ $b = -0.742638 - 0.704810I$	$-4.39769 + 1.30288I$	$-6.82606 - 0.92724I$
$u = 0.331591$ $a = -2.22812$ $b = 0.539631$	-1.19004	-8.11080

$$\text{II. } I_2^u = \langle 5u^5 - 3u^4 - 7u^3 + 8u^2 + 17b + 11u + 1, 4u^5 - 16u^4 - 26u^3 + 20u^2 + 17a + 19u - 6, u^6 + u^5 - u^4 - 2u^3 + u + 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_3 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_2 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -u^2 + 1 \\ -u^2 \end{pmatrix} \\ a_7 &= \begin{pmatrix} u^5 - 2u^3 + u \\ u^5 - u^3 + u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -0.235294u^5 + 0.941176u^4 + \dots - 1.11765u + 0.352941 \\ -0.294118u^5 + 0.176471u^4 + \dots - 0.647059u - 0.0588235 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 0.764706u^5 + 0.941176u^4 + \dots - 0.117647u + 0.352941 \\ 0.705882u^5 + 0.176471u^4 + \dots + 0.352941u - 0.0588235 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -u^5 + 2u^3 - u \\ -u^5 + u^3 - u \end{pmatrix} \\ a_5 &= \begin{pmatrix} u \\ -u^3 + u \end{pmatrix} \\ a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -2u^5 + 3u^3 - 2u \\ -u^5 + u^3 - u \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.294118u^5 + 0.823529u^4 + \dots - 0.352941u + 0.0588235 \\ 0 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = -\frac{1033}{289}u^5 + \frac{511}{289}u^4 + \frac{2269}{289}u^3 - \frac{337}{289}u^2 - \frac{2548}{289}u - \frac{2964}{289}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1$
c_2, c_4	$u^6 + u^5 - u^4 - 2u^3 + u + 1$
c_3	u^6
c_5, c_{11}	$u^6 - u^5 - u^4 + 2u^3 - u + 1$
c_7	$(u - 1)^6$
c_8	$17(17u^6 - 28u^5 + 4u^4 + 15u^3 - 6u^2 - 2u + 1)$
c_9	$17(17u^6 - 58u^5 + 89u^4 - 74u^3 + 35u^2 - 9u + 1)$
c_{10}	$(u + 1)^6$
c_{12}	$u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6, c_{12}	$y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1$
c_2, c_4, c_5 c_{11}	$y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1$
c_3	y^6
c_7, c_{10}	$(y - 1)^6$
c_8	$289(289y^6 - 648y^5 + 652y^4 - 351y^3 + 104y^2 - 16y + 1)$
c_9	$289(289y^6 - 338y^5 + 527y^4 - 256y^3 + 71y^2 - 11y + 1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002190 + 0.295542I$ $a = -0.286953 + 1.027550I$ $b = -0.796035 - 0.285065I$	$-3.53554 - 0.92430I$	$-14.06145 + 1.00389I$
$u = 1.002190 - 0.295542I$ $a = -0.286953 - 1.027550I$ $b = -0.796035 + 0.285065I$	$-3.53554 + 0.92430I$	$-14.06145 - 1.00389I$
$u = -0.428243 + 0.664531I$ $a = 1.66082 + 0.38372I$ $b = 0.520699 + 0.006734I$	$0.245672 - 0.924305I$	$-2.49217 - 3.04801I$
$u = -0.428243 - 0.664531I$ $a = 1.66082 - 0.38372I$ $b = 0.520699 - 0.006734I$	$0.245672 + 0.924305I$	$-2.49217 + 3.04801I$
$u = -1.073950 + 0.558752I$ $a = -0.93269 + 1.16339I$ $b = -0.548194 + 0.053856I$	$-1.64493 + 5.69302I$	$-11.73704 + 0.42566I$
$u = -1.073950 - 0.558752I$ $a = -0.93269 - 1.16339I$ $b = -0.548194 - 0.053856I$	$-1.64493 - 5.69302I$	$-11.73704 - 0.42566I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)(u^{98} + 54u^{97} + \dots + 15u + 1)$
c_2	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)(u^{98} + 2u^{97} + \dots + 5u + 1)$
c_3	$u^6(u^{98} - u^{97} + \dots + 56576u - 18496)$
c_4	$(u^6 + u^5 - u^4 - 2u^3 + u + 1)(u^{98} - 2u^{97} + \dots + u + 1)$
c_5	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{98} + 2u^{97} + \dots + 5u + 1)$
c_6	$(u^6 - 3u^5 + 5u^4 - 4u^3 + 2u^2 - u + 1)(u^{98} + 6u^{97} + \dots - 585u - 117)$
c_7	$((u - 1)^6)(u^{98} - 7u^{97} + \dots - 1854u - 289)$
c_8	$289(17u^6 - 28u^5 + 4u^4 + 15u^3 - 6u^2 - 2u + 1)$ $\cdot (17u^{98} + 153u^{97} + \dots - 11440320u - 3023343)$
c_9	$289(17u^6 - 58u^5 + 89u^4 - 74u^3 + 35u^2 - 9u + 1)$ $\cdot (17u^{98} - 17u^{97} + \dots - 16429842u + 5717884)$
c_{10}	$((u + 1)^6)(u^{98} - 7u^{97} + \dots - 1854u - 289)$
c_{11}	$(u^6 - u^5 - u^4 + 2u^3 - u + 1)(u^{98} - 2u^{97} + \dots + u + 1)$
c_{12}	$(u^6 + 3u^5 + 5u^4 + 4u^3 + 2u^2 + u + 1)(u^{98} + 6u^{97} + \dots - 585u - 117)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{98} - 18y^{97} + \dots - 63y + 1)$
c_2, c_5	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{98} - 54y^{97} + \dots - 15y + 1)$
c_3	$y^6(y^{98} - 39y^{97} + \dots - 8.09089 \times 10^9 y + 3.42102 \times 10^8)$
c_4, c_{11}	$(y^6 - 3y^5 + 5y^4 - 4y^3 + 2y^2 - y + 1)(y^{98} + 66y^{97} + \dots - 15y + 1)$
c_6, c_{12}	$(y^6 + y^5 + 5y^4 + 6y^2 + 3y + 1)(y^{98} + 90y^{97} + \dots - 361179y + 13689)$
c_7, c_{10}	$((y - 1)^6)(y^{98} - 85y^{97} + \dots - 453680y + 83521)$
c_8	$83521(289y^6 - 648y^5 + 652y^4 - 351y^3 + 104y^2 - 16y + 1)$ $\cdot (289y^{98} - 16167y^{97} + \dots + 80567110376298y + 9140602895649)$
c_9	$83521(289y^6 - 338y^5 + 527y^4 - 256y^3 + 71y^2 - 11y + 1)$ $\cdot (289y^{98} - 19669y^{97} + \dots + 565449262390916y + 32694197437456)$