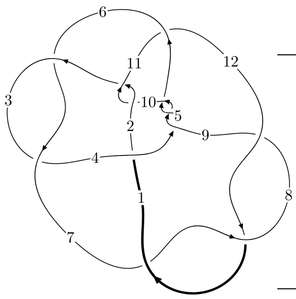
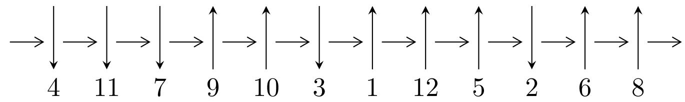
$12a_{1204}$ $(K12a_{1204})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & 4.67618 \times 10^{190} u^{79} + 2.29826 \times 10^{191} u^{78} + \cdots + 5.15330 \times 10^{191} b - 1.47967 \times 10^{191}, \\ & 5.17863 \times 10^{194} u^{79} + 2.01367 \times 10^{195} u^{78} + \cdots + 3.38572 \times 10^{194} a - 3.88078 \times 10^{195},\ u^{80} + 4u^{79} + \cdots - 12u \end{aligned}$$
$$I_2^u = \langle -au + b + 2a + u - 1,\ 3a^2 + 2au - 4a - 3u + 1,\ u^2 - u + 1 \rangle$$
$$I_3^u = \langle b,\ 3a - u + 2,\ u^2 - u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 86 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. $\boldsymbol{I_1^u = \langle 4.68 \times 10^{190} u^{79} + 2.30 \times 10^{191} u^{78} + \cdots + 5.15 \times 10^{191} b - 1.48 \times 10^{191},\ 5.18 \times 10^{194} u^{79} + 2.01 \times 10^{195} u^{78} + \cdots + 3.39 \times 10^{194} a - 3.88 \times 10^{195},\ u^{80} + 4u^{79} + \cdots - 12u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1.52955u^{79} - 5.94754u^{78} + \cdots + 130.269u + 11.4622 \\ -0.0907415u^{79} - 0.445978u^{78} + \cdots + 17.6286u + 0.287130 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1.65356u^{79} - 6.34789u^{78} + \cdots + 128.810u + 11.4548 \\ -0.0338236u^{79} - 0.258688u^{78} + \cdots + 20.3603u + 0.198906 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.665941u^{79} + 2.23325u^{78} + \cdots - 127.524u - 19.4828 \\ 0.155254u^{79} + 0.344909u^{78} + \cdots + 1.73662u - 2.15467 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1.43881u^{79} - 5.50156u^{78} + \cdots + 112.640u + 11.1751 \\ -0.0907415u^{79} - 0.445978u^{78} + \cdots + 17.6286u + 0.287130 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0.0923606u^{79} - 0.0500166u^{78} + \cdots + 123.650u + 20.7512 \\ -0.0594848u^{79} - 0.0792420u^{78} + \cdots - 4.89863u + 2.41543 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.34210u^{79} + 5.18617u^{78} + \cdots - 149.249u - 11.9533 \\ -0.0202947u^{79} + 0.0673583u^{78} + \cdots - 22.2316u - 0.192689 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1.65777u^{79} - 6.13193u^{78} + \cdots + 175.851u + 12.0583 \\ -0.266688u^{79} - 0.803074u^{78} + \cdots + 26.9199u + 0.143262 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.0702822u^{79} - 0.631763u^{78} + \cdots + 138.701u + 15.5114 \\ 0.144757u^{79} + 0.784009u^{78} + \cdots - 4.02021u + 2.28039 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.129037u^{79} - 0.380541u^{78} + \cdots - 11.6124u + 3.37199$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$219(219u^{80} + 1298u^{79} + \cdots + 2.36254 \times 10^7 u - 1524503)$
c_2, c_{10}	$u^{80} + 4u^{79} + \cdots - 12u + 1$
c_3, c_6	$u^{80} + 3u^{79} + \cdots + 313u + 63$
c_4, c_5, c_9	$u^{80} + 3u^{79} + \cdots + 180u + 36$
c_7, c_8, c_{12}	$u^{80} - 2u^{79} + \cdots - 2u + 1$
c_{11}	$219(219u^{80} - 1403u^{79} + \cdots - 226003u + 252193)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$47961(47961y^{80} - 3172252y^{79} + \cdots - 2.97153 \times 10^{14}y + 2.32411 \times 10^{12})$
c_2, c_{10}	$y^{80} - 44y^{79} + \cdots - 392y + 1$
c_3, c_6	$y^{80} - 69y^{79} + \cdots + 7367y + 3969$
c_4, c_5, c_9	$y^{80} - 75y^{79} + \cdots + 9648y + 1296$
c_7, c_8, c_{12}	$y^{80} + 76y^{79} + \cdots - 72y + 1$
c_{11}	47961 $\cdot (47961y^{80} + 610535y^{79} + \cdots + 286076439375y + 63601309249)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.983733 + 0.200765I$ $a = 0.406326 - 1.062540I$ $b = -0.210455 - 0.410314I$	$-1.68334 + 0.90111I$	0
$u = -0.983733 - 0.200765I$ $a = 0.406326 + 1.062540I$ $b = -0.210455 + 0.410314I$	$-1.68334 - 0.90111I$	0
$u = 0.061105 + 1.004630I$ $a = 0.047178 - 0.295322I$ $b = 0.350818 - 0.747248I$	$-9.01085 - 6.45760I$	$0. + 5.37585I$
$u = 0.061105 - 1.004630I$ $a = 0.047178 + 0.295322I$ $b = 0.350818 + 0.747248I$	$-9.01085 + 6.45760I$	$0. - 5.37585I$
$u = -0.933989 + 0.285753I$ $a = -0.74243 - 1.63544I$ $b = -1.22686 - 0.73490I$	$-2.96990 + 3.39349I$	$0. - 7.61793I$
$u = -0.933989 - 0.285753I$ $a = -0.74243 + 1.63544I$ $b = -1.22686 + 0.73490I$	$-2.96990 - 3.39349I$	$0. + 7.61793I$
$u = 0.935699 + 0.210723I$ $a = 0.93109 - 1.46911I$ $b = 1.36724 - 0.37575I$	$1.85985 - 1.63062I$	$6.44657 + 8.90264I$
$u = 0.935699 - 0.210723I$ $a = 0.93109 + 1.46911I$ $b = 1.36724 + 0.37575I$	$1.85985 + 1.63062I$	$6.44657 - 8.90264I$
$u = 0.982994 + 0.345718I$ $a = 0.35044 + 2.66174I$ $b = -1.267870 + 0.058555I$	$-3.53605 - 1.28537I$	0
$u = 0.982994 - 0.345718I$ $a = 0.35044 - 2.66174I$ $b = -1.267870 - 0.058555I$	$-3.53605 + 1.28537I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.623999 + 0.842208I$ $a = -0.557374 + 0.473399I$ $b = 1.44059 - 0.02605I$	$4.98872 + 2.13695I$	0
$u = -0.623999 - 0.842208I$ $a = -0.557374 - 0.473399I$ $b = 1.44059 + 0.02605I$	$4.98872 - 2.13695I$	0
$u = -0.625616 + 0.709759I$ $a = -0.274228 - 0.231688I$ $b = -0.446384 - 0.021824I$	$-1.13446 + 2.26935I$	$7.02637 - 5.16830I$
$u = -0.625616 - 0.709759I$ $a = -0.274228 + 0.231688I$ $b = -0.446384 + 0.021824I$	$-1.13446 - 2.26935I$	$7.02637 + 5.16830I$
$u = 1.016920 + 0.278841I$ $a = -0.10025 - 1.49918I$ $b = 0.328162 - 0.823029I$	$-1.15386 - 3.31282I$	0
$u = 1.016920 - 0.278841I$ $a = -0.10025 + 1.49918I$ $b = 0.328162 + 0.823029I$	$-1.15386 + 3.31282I$	0
$u = 1.049730 + 0.159659I$ $a = -1.42081 - 1.29437I$ $b = -0.033240 - 0.406752I$	$-7.23462 + 0.23504I$	0
$u = 1.049730 - 0.159659I$ $a = -1.42081 + 1.29437I$ $b = -0.033240 + 0.406752I$	$-7.23462 - 0.23504I$	0
$u = -1.079310 + 0.017861I$ $a = -3.67096 - 0.58217I$ $b = -1.354270 - 0.008617I$	$1.55886 + 0.00067I$	0
$u = -1.079310 - 0.017861I$ $a = -3.67096 + 0.58217I$ $b = -1.354270 + 0.008617I$	$1.55886 - 0.00067I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 0.340631+0.848794I$ $a=\ \ 0.477246+0.103415I$ $b=-1.44761-0.13462I$	$7.05350+2.19153I$	$9.52387-1.99188I$
$u=\ \ 0.340631-0.848794I$ $a=\ \ 0.477246-0.103415I$ $b=-1.44761+0.13462I$	$7.05350-2.19153I$	$9.52387+1.99188I$
$u=-1.048170+0.314077I$ $a=\ \ 0.23334-1.69617I$ $b=-0.177827-1.133290I$	$-6.52325+5.35877I$	0
$u=-1.048170-0.314077I$ $a=\ \ 0.23334+1.69617I$ $b=-0.177827+1.133290I$	$-6.52325-5.35877I$	0
$u=-0.106979+1.115510I$ $a=-0.042289-0.245084I$ $b=-0.182302-0.480029I$	$-1.86292+2.79330I$	0
$u=-0.106979-1.115510I$ $a=-0.042289+0.245084I$ $b=-0.182302+0.480029I$	$-1.86292-2.79330I$	0
$u=-0.212519+0.849931I$ $a=-0.308623-0.038482I$ $b=\ \ 1.43643-0.26260I$	$1.68255-5.75611I$	$4.38217+3.71688I$
$u=-0.212519-0.849931I$ $a=-0.308623+0.038482I$ $b=\ \ 1.43643+0.26260I$	$1.68255+5.75611I$	$4.38217-3.71688I$
$u=-0.138283+1.170680I$ $a=\ \ 0.583637+0.306881I$ $b=-1.44697+0.29238I$	$-3.25272-10.24640I$	0
$u=-0.138283-1.170680I$ $a=\ \ 0.583637-0.306881I$ $b=-1.44697-0.29238I$	$-3.25272+10.24640I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.048580 + 0.539589I$ $a = -0.03548 + 1.55272I$ $b = 1.399330 + 0.163222I$	$3.52510 + 3.03832I$	0
$u = -1.048580 - 0.539589I$ $a = -0.03548 - 1.55272I$ $b = 1.399330 - 0.163222I$	$3.52510 - 3.03832I$	0
$u = 0.818925$ $a = 0.650075$ $b = 1.65973$	2.81430	14.1920
$u = -0.777268 + 0.158021I$ $a = -1.28789 - 1.00859I$ $b = -1.77876 - 0.23396I$	$-1.23750 + 1.13200I$	$5.16037 - 4.27670I$
$u = -0.777268 - 0.158021I$ $a = -1.28789 + 1.00859I$ $b = -1.77876 + 0.23396I$	$-1.23750 - 1.13200I$	$5.16037 + 4.27670I$
$u = 1.222600 + 0.255392I$ $a = -0.298898 - 1.012200I$ $b = -0.675657 - 0.690427I$	$-5.60593 - 3.18248I$	0
$u = 1.222600 - 0.255392I$ $a = -0.298898 + 1.012200I$ $b = -0.675657 + 0.690427I$	$-5.60593 + 3.18248I$	0
$u = 1.142820 + 0.531044I$ $a = -0.29895 + 1.56428I$ $b = -1.44537 + 0.29546I$	$4.55144 - 7.27382I$	0
$u = 1.142820 - 0.531044I$ $a = -0.29895 - 1.56428I$ $b = -1.44537 - 0.29546I$	$4.55144 + 7.27382I$	0
$u = 1.248980 + 0.228822I$ $a = 1.50489 - 0.50878I$ $b = 1.290870 + 0.128288I$	$-3.14500 + 2.19857I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.248980 - 0.228822I$ $a = 1.50489 + 0.50878I$ $b = 1.290870 - 0.128288I$	$-3.14500 - 2.19857I$	0
$u = -1.231060 + 0.327570I$ $a = 0.650637 - 0.984088I$ $b = 0.871372 - 0.916770I$	$-12.18400 + 5.43510I$	0
$u = -1.231060 - 0.327570I$ $a = 0.650637 + 0.984088I$ $b = 0.871372 + 0.916770I$	$-12.18400 - 5.43510I$	0
$u = -1.27404$ $a = -0.523112$ $b = 0.645940$	-4.24711	0
$u = -1.183130 + 0.512946I$ $a = 0.41862 + 1.63827I$ $b = 1.44596 + 0.42331I$	$-1.27215 + 10.73830I$	0
$u = -1.183130 - 0.512946I$ $a = 0.41862 - 1.63827I$ $b = 1.44596 - 0.42331I$	$-1.27215 - 10.73830I$	0
$u = 1.093750 + 0.738943I$ $a = -0.748613 - 1.122850I$ $b = 1.166760 - 0.270892I$	$-9.55293 - 2.80719I$	0
$u = 1.093750 - 0.738943I$ $a = -0.748613 + 1.122850I$ $b = 1.166760 + 0.270892I$	$-9.55293 + 2.80719I$	0
$u = 0.261215 + 1.302270I$ $a = -0.565935 + 0.149777I$ $b = 1.377250 + 0.194353I$	$3.14084 + 5.32909I$	0
$u = 0.261215 - 1.302270I$ $a = -0.565935 - 0.149777I$ $b = 1.377250 - 0.194353I$	$3.14084 - 5.32909I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.223054 + 0.595115I$ $a = -1.49321 + 0.64074I$ $b = 0.615226 + 0.539891I$	$-8.01703 - 2.08920I$	$-1.364316 + 0.139969I$
$u = 0.223054 - 0.595115I$ $a = -1.49321 - 0.64074I$ $b = 0.615226 - 0.539891I$	$-8.01703 + 2.08920I$	$-1.364316 - 0.139969I$
$u = -1.327730 + 0.475279I$ $a = -0.230483 + 1.372100I$ $b = 0.440531 + 0.965989I$	$-13.3328 + 11.6550I$	0
$u = -1.327730 - 0.475279I$ $a = -0.230483 - 1.372100I$ $b = 0.440531 - 0.965989I$	$-13.3328 - 11.6550I$	0
$u = 1.34532 + 0.46601I$ $a = 0.125579 + 1.193110I$ $b = -0.396012 + 0.794879I$	$-6.48026 - 8.12212I$	0
$u = 1.34532 - 0.46601I$ $a = 0.125579 - 1.193110I$ $b = -0.396012 - 0.794879I$	$-6.48026 + 8.12212I$	0
$u = -0.60690 + 1.30455I$ $a = 0.608740 - 0.107378I$ $b = -1.278700 + 0.099548I$	$1.48332 + 1.01891I$	0
$u = -0.60690 - 1.30455I$ $a = 0.608740 + 0.107378I$ $b = -1.278700 - 0.099548I$	$1.48332 - 1.01891I$	0
$u = 1.34808 + 0.53347I$ $a = 0.486605 + 0.764340I$ $b = 0.045270 + 0.726049I$	$-12.96030 + 0.84938I$	0
$u = 1.34808 - 0.53347I$ $a = 0.486605 - 0.764340I$ $b = 0.045270 - 0.726049I$	$-12.96030 - 0.84938I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.38093+0.48836I$ $a=-0.173702+0.905038I$ $b=\ \ 0.212560+0.657694I$	$-6.22030+3.10276I$	0
$u=-1.38093-0.48836I$ $a=-0.173702-0.905038I$ $b=\ \ 0.212560-0.657694I$	$-6.22030-3.10276I$	0
$u=-1.34090+0.60045I$ $a=-0.12043-1.56951I$ $b=-1.51716-0.36747I$	$-7.0624+16.4733I$	0
$u=-1.34090-0.60045I$ $a=-0.12043+1.56951I$ $b=-1.51716+0.36747I$	$-7.0624-16.4733I$	0
$u=-1.48152$ $a=\ \ 0.0914854$ $b=\ \ 1.00347$	-4.17379	0
$u=\ \ 1.35642+0.64883I$ $a=\ \ 0.061175-1.364930I$ $b=\ \ 1.47058-0.30512I$	$-0.49201-12.12130I$	0
$u=\ \ 1.35642-0.64883I$ $a=\ \ 0.061175+1.364930I$ $b=\ \ 1.47058+0.30512I$	$-0.49201+12.12130I$	0
$u=-1.32963+0.74793I$ $a=\ \ 0.144785-1.138680I$ $b=-1.381900-0.250810I$	$-1.15043+6.39677I$	0
$u=-1.32963-0.74793I$ $a=\ \ 0.144785+1.138680I$ $b=-1.381900+0.250810I$	$-1.15043-6.39677I$	0
$u=-0.135498+0.451659I$ $a=-1.052310+0.225740I$ $b=-0.388744+0.698459I$	$-4.10847-2.26740I$	$1.42053+3.16015I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.135498 - 0.451659I$ $a = -1.052310 - 0.225740I$ $b = -0.388744 - 0.698459I$	$-4.10847 + 2.26740I$	$1.42053 - 3.16015I$
$u = 0.234414 + 0.396606I$ $a = 0.549751 - 0.088710I$ $b = 0.468548 + 0.287683I$	$0.918234 + 0.452351I$	$9.16608 - 2.88117I$
$u = 0.234414 - 0.396606I$ $a = 0.549751 + 0.088710I$ $b = 0.468548 - 0.287683I$	$0.918234 - 0.452351I$	$9.16608 + 2.88117I$
$u = 1.51980 + 0.33755I$ $a = -0.427503 - 0.115599I$ $b = -1.254650 - 0.289980I$	$-8.94217 + 4.52912I$	0
$u = 1.51980 - 0.33755I$ $a = -0.427503 + 0.115599I$ $b = -1.254650 + 0.289980I$	$-8.94217 - 4.52912I$	0
$u = -0.145928 + 0.335228I$ $a = 1.74460 + 1.61934I$ $b = -0.225695 + 0.345536I$	$-1.68024 + 0.84062I$	$-2.79003 + 2.56570I$
$u = -0.145928 - 0.335228I$ $a = 1.74460 - 1.61934I$ $b = -0.225695 - 0.345536I$	$-1.68024 - 0.84062I$	$-2.79003 - 2.56570I$
$u = -0.179903 + 0.241663I$ $a = -2.40130 - 2.21797I$ $b = -1.46662 + 0.24782I$	$-1.32557 - 0.73674I$	$2.49863 - 0.34688I$
$u = -0.179903 - 0.241663I$ $a = -2.40130 + 2.21797I$ $b = -1.46662 - 0.24782I$	$-1.32557 + 0.73674I$	$2.49863 + 0.34688I$
$u = 0.0496730$ $a = 20.2292$ $b = 1.44197$	3.34378	2.52060

II. $\boldsymbol{I_2^u = \langle -au + b + 2a + u - 1,\ 3a^2 + 2au - 4a - 3u + 1,\ u^2 - u + 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4u$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$9(9u^4 - 18u^3 + 27u^2 - 18u + 7)$
c_2, c_{12}	$(u^2 + u + 1)^2$
c_3	$(u + 1)^4$
c_4, c_5, c_9	$(u^2 - 2)^2$
c_6	$(u - 1)^4$
c_7, c_8, c_{10}	$(u^2 - u + 1)^2$
c_{11}	$9(9u^4 - 12u + 7)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$81(81y^4 + 162y^3 + 207y^2 + 54y + 49)$
c_2, c_7, c_8 c_{10}, c_{12}	$(y^2 + y + 1)^2$
c_3, c_6	$(y-1)^4$
c_4, c_5, c_9	$(y-2)^4$
c_{11}	$81(81y^4 + 126y^2 - 144y + 49)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = 1.207110 + 0.119573I$ $b = -1.41421$	$3.28987 - 2.02988I$	$2.00000 + 3.46410I$
$u = 0.500000 + 0.866025I$ $a = -0.207107 - 0.696923I$ $b = 1.41421$	$3.28987 - 2.02988I$	$2.00000 + 3.46410I$
$u = 0.500000 - 0.866025I$ $a = 1.207110 - 0.119573I$ $b = -1.41421$	$3.28987 + 2.02988I$	$2.00000 - 3.46410I$
$u = 0.500000 - 0.866025I$ $a = -0.207107 + 0.696923I$ $b = 1.41421$	$3.28987 + 2.02988I$	$2.00000 - 3.46410I$

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ u - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u \\ u + 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{1}{3}u - \frac{2}{3} \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{4}{3}u - \frac{2}{3} \\ -u - 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} \frac{1}{3}u + 1 \\ u - 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{1}{3}u - \frac{2}{3} \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{1}{3}u - \frac{2}{3} \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.333333 \\ u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u - \frac{1}{3} \\ -u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{4}{3}u - \frac{14}{3}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$9(9y^2 - 3y + 1)$
c_2, c_7, c_8 c_{10}, c_{12}	$y^2 + y + 1$
c_3, c_6	$(y-1)^2$
c_4, c_5, c_9	y^2
c_{11}	$9(3y+1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = -0.500000 + 0.288675I$ $b = 0$	$-1.64493 - 2.02988I$	$-5.33333 - 1.15470I$
$u = 0.500000 - 0.866025I$ $a = -0.500000 - 0.288675I$ $b = 0$	$-1.64493 + 2.02988I$	$-5.33333 + 1.15470I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$5913(3u^2-3u+1)(9u^4-18u^3+27u^2-18u+7)$ $\cdot\,(219u^{80}+1298u^{79}+\cdots+23625360u-1524503)$
c_2	$((u^2+u+1)^3)(u^{80}+4u^{79}+\cdots-12u+1)$
c_3	$((u-1)^2)(u+1)^4(u^{80}+3u^{79}+\cdots+313u+63)$
c_4, c_5, c_9	$u^2(u^2-2)^2(u^{80}+3u^{79}+\cdots+180u+36)$
c_6	$((u-1)^4)(u+1)^2(u^{80}+3u^{79}+\cdots+313u+63)$
c_7, c_8	$((u^2-u+1)^2)(u^2+u+1)(u^{80}-2u^{79}+\cdots-2u+1)$
c_{10}	$((u^2-u+1)^3)(u^{80}+4u^{79}+\cdots-12u+1)$
c_{11}	$5913(3u^2+1)(9u^4-12u+7)$ $\cdot\,(219u^{80}-1403u^{79}+\cdots-226003u+252193)$
c_{12}	$(u^2-u+1)(u^2+u+1)^2(u^{80}-2u^{79}+\cdots-2u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$34963569(9y^2-3y+1)(81y^4+162y^3+207y^2+54y+49)$ $\cdot(4.80\times10^4y^{80}-3.17\times10^6y^{79}+\cdots-2.97\times10^{14}y+2.32\times10^{12})$
c_2, c_{10}	$((y^2+y+1)^3)(y^{80}-44y^{79}+\cdots-392y+1)$
c_3, c_6	$((y-1)^6)(y^{80}-69y^{79}+\cdots+7367y+3969)$
c_4, c_5, c_9	$y^2(y-2)^4(y^{80}-75y^{79}+\cdots+9648y+1296)$
c_7, c_8, c_{12}	$((y^2+y+1)^3)(y^{80}+76y^{79}+\cdots-72y+1)$
c_{11}	$34963569(3y+1)^2(81y^4+126y^2-144y+49)$ $\cdot(47961y^{80}+610535y^{79}+\cdots+286076439375y+63601309249)$