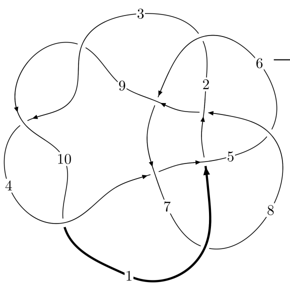
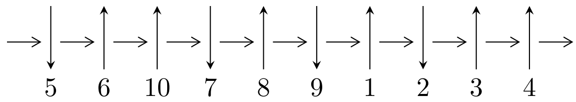
10_{112} $(K10a_{76})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I^u_1 = \langle -11u^{18} + 43u^{17} + \cdots + 3b - 32,\ -95u^{18} + 507u^{17} + \cdots + 21a - 761,\ u^{19} - 6u^{18} + \cdots - 11u - 7\rangle$$
$$I^u_2 = \langle u^{14} + 2u^{13} + \cdots + b + 2,\ -2u^{14}a - 2u^{14} + \cdots - 4a - 4,$$
$$u^{15} + 2u^{14} - 6u^{13} - 11u^{12} + 16u^{11} + 19u^{10} - 30u^9 - 7u^8 + 38u^7 - 12u^6 - 20u^5 + 14u^4 - 3u^2 + 2u + 1\rangle$$
$$I^u_3 = \langle -u^4 - u^3 + 2u^2 + b + 2u + 1,\ 2u^4 + u^3 - 5u^2 + a - u,\ u^5 - u^4 - 3u^3 + 3u^2 + 1\rangle$$
$$I^u_4 = \langle b + 1,\ a^2 - a - 1,\ u + 1\rangle$$

$$I^v_1 = \langle a,\ b + 1,\ v + 1\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 57 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. $I^u_1 = \langle -11u^{18} + 43u^{17} + \cdots + 3b - 32,\ -95u^{18} + 507u^{17} + \cdots + 21a - 761,\ u^{19} - 6u^{18} + \cdots - 11u - 7\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2 + 1 \\ u^4 - 2u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 4.52381u^{18} - 24.1429u^{17} + \cdots + 85.8571u + 36.2381 \\ \frac{11}{3}u^{18} - \frac{43}{3}u^{17} + \cdots + \frac{64}{3}u + \frac{32}{3} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 8.19048u^{18} - 38.4762u^{17} + \cdots + 107.190u + 46.9048 \\ \frac{11}{3}u^{18} - \frac{43}{3}u^{17} + \cdots + \frac{64}{3}u + \frac{32}{3} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -8.47619u^{18} + 39.5238u^{17} + \cdots - 97.4762u - 43.0952 \\ \frac{25}{3}u^{18} - \frac{116}{3}u^{17} + \cdots + 99u + 41 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.809524u^{18} + 2.85714u^{17} + \cdots + 1.52381u + 0.238095 \\ -\frac{28}{3}u^{18} + 43u^{17} + \cdots - \frac{323}{3}u - \frac{143}{3} \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 6.19048u^{18} - 30.1429u^{17} + \cdots + 87.5238u + 39.2381 \\ -\frac{1}{3}u^{18} + \frac{10}{3}u^{17} + \cdots - 12u - \frac{17}{3} \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= \frac{59}{3}u^{18} - \frac{281}{3}u^{17} + 23u^{16} + 434u^{15} - \frac{847}{3}u^{14} - \frac{2660}{3}u^{13} - 22u^{12} + \frac{5324}{3}u^{11} + 1228u^{10} - \frac{6821}{3}u^9 - 2347u^8 + 388u^7 + \frac{9250}{3}u^6 + \frac{2645}{3}u^5 - 1147u^4 - 1166u^3 - 10u^2 + \frac{733}{3}u + 99$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{19} - 2u^{18} + \cdots - 12u^2 + 1$
c_2, c_7	$u^{19} - 2u^{18} + \cdots + 2u + 1$
c_3, c_9, c_{10}	$u^{19} - 6u^{18} + \cdots - 11u - 7$
c_4, c_6	$u^{19} + 2u^{18} + \cdots - 2u + 1$
c_5	$u^{19} + 11u^{18} + \cdots - 22u - 7$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{19} - 12y^{18} + \cdots + 24y - 1$
c_2, c_7	$y^{19} - 6y^{18} + \cdots + 6y - 1$
c_3, c_9, c_{10}	$y^{19} - 22y^{18} + \cdots + 331y - 49$
c_4, c_6	$y^{19} - 2y^{18} + \cdots + 18y - 1$
c_5	$y^{19} - y^{18} + \cdots + 316y - 49$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.650742 + 0.795961I$ $a = 0.354047 - 0.615330I$ $b = 0.971206 + 0.919721I$	$0.21692 - 10.80920I$	$2.85095 + 8.95586I$
$u = -0.650742 - 0.795961I$ $a = 0.354047 + 0.615330I$ $b = 0.971206 - 0.919721I$	$0.21692 + 10.80920I$	$2.85095 - 8.95586I$
$u = -0.438994 + 0.966374I$ $a = -0.257963 - 0.341691I$ $b = 0.542166 - 0.571410I$	$-0.47646 + 5.13597I$	$2.04643 - 8.91772I$
$u = -0.438994 - 0.966374I$ $a = -0.257963 + 0.341691I$ $b = 0.542166 + 0.571410I$	$-0.47646 - 5.13597I$	$2.04643 + 8.91772I$
$u = -0.500281 + 0.484136I$ $a = -0.276043 + 1.168470I$ $b = -0.989225 - 0.870492I$	$-1.71464 - 3.32825I$	$-3.18882 + 7.99623I$
$u = -0.500281 - 0.484136I$ $a = -0.276043 - 1.168470I$ $b = -0.989225 + 0.870492I$	$-1.71464 + 3.32825I$	$-3.18882 - 7.99623I$
$u = 1.320090 + 0.044695I$ $a = 0.592095 + 1.229420I$ $b = -0.158877 - 0.560433I$	$2.62449 - 0.38341I$	$2.28736 + 1.27302I$
$u = 1.320090 - 0.044695I$ $a = 0.592095 - 1.229420I$ $b = -0.158877 + 0.560433I$	$2.62449 + 0.38341I$	$2.28736 - 1.27302I$
$u = 0.612375$ $a = 0.930010$ $b = 0.220758$	1.15807	8.48700
$u = -1.43114$ $a = 0.461846$ $b = -1.60691$	3.44527	2.15800

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.397187 + 0.334084I$ $a = 0.957646 + 0.804912I$ $b = -0.907078 + 0.217237I$	$-1.91282 + 0.23550I$	$-3.85755 + 0.64166I$
$u = -0.397187 - 0.334084I$ $a = 0.957646 - 0.804912I$ $b = -0.907078 - 0.217237I$	$-1.91282 - 0.23550I$	$-3.85755 - 0.64166I$
$u = 1.52853 + 0.13991I$ $a = 0.49931 - 2.07085I$ $b = -0.98962 + 1.48876I$	$5.05013 + 5.56057I$	$-1.07165 - 5.51845I$
$u = 1.52853 - 0.13991I$ $a = 0.49931 + 2.07085I$ $b = -0.98962 - 1.48876I$	$5.05013 - 5.56057I$	$-1.07165 + 5.51845I$
$u = -1.55827$ $a = -0.243774$ $b = 0.971797$	8.51485	10.8570
$u = 1.58255 + 0.26743I$ $a = -0.25739 + 1.68674I$ $b = 1.19555 - 1.28537I$	$7.5458 + 14.7559I$	$5.72071 - 7.88264I$
$u = 1.58255 - 0.26743I$ $a = -0.25739 - 1.68674I$ $b = 1.19555 + 1.28537I$	$7.5458 - 14.7559I$	$5.72071 + 7.88264I$
$u = 1.74455 + 0.26523I$ $a = 0.099974 - 0.506108I$ $b = -0.456945 + 0.555778I$	$6.78146 + 0.51735I$	$9.96153 - 9.39104I$
$u = 1.74455 - 0.26523I$ $a = 0.099974 + 0.506108I$ $b = -0.456945 - 0.555778I$	$6.78146 - 0.51735I$	$9.96153 + 9.39104I$

II.

$\boldsymbol{I_2^u = \langle u^{14}+2u^{13}+\cdots+b+2,\ -2u^{14}a-2u^{14}+\cdots-4a-4,\ u^{15}+2u^{14}+\cdots+2u+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u \\ -u^3+u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^2+1 \\ u^4-2u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} a \\ -u^{14}-2u^{13}+\cdots-au-2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^{14}-2u^{13}+\cdots+a-2 \\ -u^{14}-2u^{13}+\cdots-au-2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^{13}-u^{12}+\cdots+a-3u \\ -u^{14}a-u^{13}a+\cdots-a-1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u^{13}-u^{12}+\cdots+a-1 \\ -u^{14}-u^{13}+\cdots-u-2 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^{14}a-u^{14}+\cdots+2a-u \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 11u^{14}+9u^{13}-77u^{12}-34u^{11}+218u^{10}-21u^9-319u^8+224u^7+214u^6-298u^5+14u^4+132u^3-60u^2-5u+23$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^{30} + 2u^{28} + \cdots + 7u + 1$
c_2, c_7	$u^{30} - 4u^{28} + \cdots - 37u + 43$
c_3, c_9, c_{10}	$(u^{15} + 2u^{14} + \cdots + 2u + 1)^2$
c_4, c_6	$u^{30} - 3u^{29} + \cdots - 42u + 7$
c_5	$(u^{15} - 7u^{14} + \cdots + 3u - 2)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^{30} + 4y^{29} + \cdots - 19y + 1$
c_2, c_7	$y^{30} - 8y^{29} + \cdots - 32587y + 1849$
c_3, c_9, c_{10}	$(y^{15} - 16y^{14} + \cdots + 10y - 1)^2$
c_4, c_6	$y^{30} + 13y^{29} + \cdots + 182y + 49$
c_5	$(y^{15} - 3y^{14} + \cdots + 37y - 4)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.564527 + 0.799929I$ $a = 0.618356 + 0.354320I$ $b = 0.554999 - 0.686515I$	$2.03837 + 2.66927I$	$9.65376 - 4.84373I$
$u = 0.564527 + 0.799929I$ $a = -0.180396 - 0.172783I$ $b = -0.148347 + 0.802094I$	$2.03837 + 2.66927I$	$9.65376 - 4.84373I$
$u = 0.564527 - 0.799929I$ $a = 0.618356 - 0.354320I$ $b = 0.554999 + 0.686515I$	$2.03837 - 2.66927I$	$9.65376 + 4.84373I$
$u = 0.564527 - 0.799929I$ $a = -0.180396 + 0.172783I$ $b = -0.148347 - 0.802094I$	$2.03837 - 2.66927I$	$9.65376 + 4.84373I$
$u = 0.860038 + 0.294980I$ $a = 1.344360 - 0.145933I$ $b = -0.576437 - 0.370669I$	$0.620973 - 0.239040I$	$7.64024 + 3.49944I$
$u = 0.860038 + 0.294980I$ $a = 0.467288 + 0.091114I$ $b = 0.940505 - 0.025509I$	$0.620973 - 0.239040I$	$7.64024 + 3.49944I$
$u = 0.860038 - 0.294980I$ $a = 1.344360 + 0.145933I$ $b = -0.576437 + 0.370669I$	$0.620973 + 0.239040I$	$7.64024 - 3.49944I$
$u = 0.860038 - 0.294980I$ $a = 0.467288 - 0.091114I$ $b = 0.940505 + 0.025509I$	$0.620973 + 0.239040I$	$7.64024 - 3.49944I$
$u = 0.239953 + 0.580457I$ $a = -0.446760 - 0.059168I$ $b = -0.908941 + 1.005900I$	$-1.25960 + 3.60373I$	$-3.55671 - 7.52468I$
$u = 0.239953 + 0.580457I$ $a = 0.85432 + 1.67566I$ $b = 0.632582 - 0.043404I$	$-1.25960 + 3.60373I$	$-3.55671 - 7.52468I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.239953 - 0.580457I$ $a = -0.446760 + 0.059168I$ $b = -0.908941 - 1.005900I$	$-1.25960 - 3.60373I$	$-3.55671 + 7.52468I$
$u = 0.239953 - 0.580457I$ $a = 0.85432 - 1.67566I$ $b = 0.632582 + 0.043404I$	$-1.25960 - 3.60373I$	$-3.55671 + 7.52468I$
$u = -1.42712 + 0.14742I$ $a = -0.17362 - 1.66530I$ $b = 0.195570 + 0.362588I$	$4.10336 - 6.07313I$	$1.68774 + 6.92177I$
$u = -1.42712 + 0.14742I$ $a = 0.38365 + 2.08559I$ $b = -1.15734 - 1.68991I$	$4.10336 - 6.07313I$	$1.68774 + 6.92177I$
$u = -1.42712 - 0.14742I$ $a = -0.17362 + 1.66530I$ $b = 0.195570 - 0.362588I$	$4.10336 + 6.07313I$	$1.68774 - 6.92177I$
$u = -1.42712 - 0.14742I$ $a = 0.38365 - 2.08559I$ $b = -1.15734 + 1.68991I$	$4.10336 + 6.07313I$	$1.68774 - 6.92177I$
$u = 1.49768 + 0.04419I$ $a = -0.20828 - 1.77267I$ $b = -0.809632 + 1.029070I$	$7.81267 + 4.54595I$	$9.44858 - 4.92517I$
$u = 1.49768 + 0.04419I$ $a = -0.75346 - 1.96166I$ $b = 1.19533 + 1.83190I$	$7.81267 + 4.54595I$	$9.44858 - 4.92517I$
$u = 1.49768 - 0.04419I$ $a = -0.20828 + 1.77267I$ $b = -0.809632 - 1.029070I$	$7.81267 - 4.54595I$	$9.44858 + 4.92517I$
$u = 1.49768 - 0.04419I$ $a = -0.75346 + 1.96166I$ $b = 1.19533 - 1.83190I$	$7.81267 - 4.54595I$	$9.44858 + 4.92517I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.54349$ $a=-0.239030+0.599706I$ $b=\quad 0.938402-0.503082I$	8.47953	10.2010
$u=-1.54349$ $a=-0.239030-0.599706I$ $b=\quad 0.938402+0.503082I$	8.47953	10.2010
$u=-0.406537+0.119542I$ $a=\quad 1.03173+0.97861I$ $b=\quad 0.502233-1.320460I$	$1.41571-3.90370I$	$10.38515+7.89648I$
$u=-0.406537+0.119542I$ $a=-2.55257+2.38070I$ $b=-0.382424-0.882051I$	$1.41571-3.90370I$	$10.38515+7.89648I$
$u=-0.406537-0.119542I$ $a=\quad 1.03173-0.97861I$ $b=\quad 0.502233+1.320460I$	$1.41571+3.90370I$	$10.38515-7.89648I$
$u=-0.406537-0.119542I$ $a=-2.55257-2.38070I$ $b=-0.382424+0.882051I$	$1.41571+3.90370I$	$10.38515-7.89648I$
$u=-1.55680+0.27188I$ $a=\quad 0.037420-1.346330I$ $b=\quad 0.959638+0.986410I$	$8.99262-6.60915I$	$9.14063+5.69443I$
$u=-1.55680+0.27188I$ $a=-0.183014+1.386800I$ $b=-0.436143-1.307360I$	$8.99262-6.60915I$	$9.14063+5.69443I$
$u=-1.55680-0.27188I$ $a=\quad 0.037420+1.346330I$ $b=\quad 0.959638-0.986410I$	$8.99262+6.60915I$	$9.14063-5.69443I$
$u=-1.55680-0.27188I$ $a=-0.183014-1.386800I$ $b=-0.436143+1.307360I$	$8.99262+6.60915I$	$9.14063-5.69443I$

III.

$$\boldsymbol{I_3^u = \langle -u^4-u^3+2u^2+b+2u+1,\ 2u^4+u^3-5u^2+a-u,\ u^5-u^4-3u^3+3u^2+1\rangle}$$

(i) Arc colorings

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

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

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

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

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

$$a_7 = \begin{pmatrix} -2u^4-u^3+5u^2+u \\ u^4+u^3-2u^2-2u-1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^4+3u^2-u-1 \\ u^4+u^3-2u^2-2u-1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^4+2u^2-u+2 \\ u^4-3u^2+u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^4+3u^2-u \\ u^3-2u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^4+2u^2-u \\ u^4-2u^2 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u^4 - 7u^3 + 10u^2 + 14u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_8	$u^5 + u^4 + u^2 + u + 1$
c_2, c_7	$u^5 - u^4 + u^3 + u - 1$
c_3	$u^5 + u^4 - 3u^3 - 3u^2 - 1$
c_4, c_6	$u^5 - u^4 + 3u^3 + u + 1$
c_5	$u^5 + 4u^4 + 9u^3 + 13u^2 + 11u + 5$
c_9, c_{10}	$u^5 - u^4 - 3u^3 + 3u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_8	$y^5 - y^4 - 3y^2 - y - 1$
c_2, c_7	$y^5 + y^4 + 3y^3 + y - 1$
c_3, c_9, c_{10}	$y^5 - 7y^4 + 15y^3 - 7y^2 - 6y - 1$
c_4, c_6	$y^5 + 5y^4 + 11y^3 + 8y^2 + y - 1$
c_5	$y^5 + 2y^4 - y^3 - 11y^2 - 9y - 25$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.48162 + 0.12936I$ $a = -0.00174 - 2.14399I$ $b = -0.54328 + 1.49449I$	$6.00251 + 5.77307I$	$7.88552 - 6.98438I$
$u = 1.48162 - 0.12936I$ $a = -0.00174 + 2.14399I$ $b = -0.54328 - 1.49449I$	$6.00251 - 5.77307I$	$7.88552 + 6.98438I$
$u = -0.099006 + 0.496292I$ $a = -1.44626 + 0.01961I$ $b = -0.210516 - 0.857202I$	$0.38751 - 3.74061I$	$1.55846 + 6.53295I$
$u = -0.099006 - 0.496292I$ $a = -1.44626 - 0.01961I$ $b = -0.210516 + 0.857202I$	$0.38751 + 3.74061I$	$1.55846 - 6.53295I$
$u = -1.76524$ $a = -0.103987$ $b = 0.507589$	6.95916	12.1120

IV. $\boldsymbol{I_4^u = \langle b+1,\ a^2-a-1,\ u+1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -5$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -0.618034$ $b = -1.00000$	0	-5.00000
$u = -1.00000$ $a = \quad 1.61803$ $b = -1.00000$	0	-5.00000

V. $\boldsymbol{I_1^v = \langle a,\ b+1,\ v+1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -2 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v = -1.00000$ $a = 0$ $b = -1.00000$	-1.64493	-6.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_8	$(u+1)(u^2+u-1)(u^5+u^4+\cdots+u+1)(u^{19}-2u^{18}+\cdots-12u^2+1)$ $\cdot(u^{30}+2u^{28}+\cdots+7u+1)$
c_2, c_7	$(u+1)(u^2+u-1)(u^5-u^4+\cdots+u-1)(u^{19}-2u^{18}+\cdots+2u+1)$ $\cdot(u^{30}-4u^{28}+\cdots-37u+43)$
c_3	$u(u-1)^2(u^5+u^4+\cdots-3u^2-1)(u^{15}+2u^{14}+\cdots+2u+1)^2$ $\cdot(u^{19}-6u^{18}+\cdots-11u-7)$
c_4, c_6	$((u-1)^2)(u+1)(u^5-u^4+\cdots+u+1)(u^{19}+2u^{18}+\cdots-2u+1)$ $\cdot(u^{30}-3u^{29}+\cdots-42u+7)$
c_5	$u^3(u^5+4u^4+\cdots+11u+5)(u^{15}-7u^{14}+\cdots+3u-2)^2$ $\cdot(u^{19}+11u^{18}+\cdots-22u-7)$
c_9, c_{10}	$u(u+1)^2(u^5-u^4+\cdots+3u^2+1)(u^{15}+2u^{14}+\cdots+2u+1)^2$ $\cdot(u^{19}-6u^{18}+\cdots-11u-7)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_8	$(y-1)(y^2-3y+1)(y^5-y^4+\cdots-y-1)(y^{19}-12y^{18}+\cdots+24y-1)$ $\cdot(y^{30}+4y^{29}+\cdots-19y+1)$
c_2, c_7	$(y-1)(y^2-3y+1)(y^5+y^4+\cdots+y-1)(y^{19}-6y^{18}+\cdots+6y-1)$ $\cdot(y^{30}-8y^{29}+\cdots-32587y+1849)$
c_3, c_9, c_{10}	$y(y-1)^2(y^5-7y^4+15y^3-7y^2-6y-1)$ $\cdot((y^{15}-16y^{14}+\cdots+10y-1)^2)(y^{19}-22y^{18}+\cdots+331y-49)$
c_4, c_6	$((y-1)^3)(y^5+5y^4+\cdots+y-1)(y^{19}-2y^{18}+\cdots+18y-1)$ $\cdot(y^{30}+13y^{29}+\cdots+182y+49)$
c_5	$y^3(y^5+2y^4+\cdots-9y-25)(y^{15}-3y^{14}+\cdots+37y-4)^2$ $\cdot(y^{19}-y^{18}+\cdots+316y-49)$