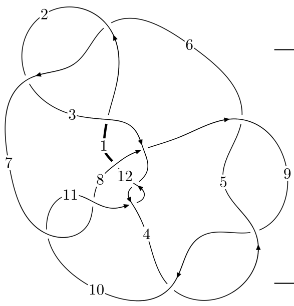
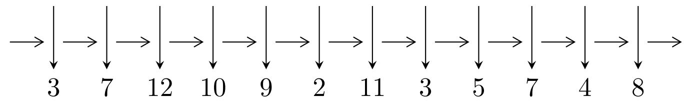
$12n_{0585}$ ($K12n_{0585}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -3u^{19} - 26u^{18} + \cdots + 2b + 8,\ u^{19} + 13u^{18} + \cdots + 2a - 25,\ u^{20} + 8u^{19} + \cdots - 10u - 4 \rangle$$

$$I_2^u = \langle 367u^4a^3 - 289u^4a^2 + \cdots + 163a - 69,\ -u^4a - 9u^4 + \cdots - 2a^3 + 3a^2,\ u^5 - u^4 + 2u^3 - u^2 + u - 1 \rangle$$

$$\begin{aligned} I_3^u = \langle & u^{12} - 2u^{11} + 8u^{10} - 12u^9 + 23u^8 - 26u^7 + 31u^6 - 25u^5 + 19u^4 - 8u^3 + 3u^2 + b + u - 1, \\ & -4u^{12} + 12u^{11} + \cdots + 3a - 5, \\ & u^{13} - 3u^{12} + 11u^{11} - 22u^{10} + 43u^9 - 62u^8 + 82u^7 - 89u^6 + 85u^5 - 68u^4 + 46u^3 - 25u^2 + 11u - 3 \rangle \end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 53 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. $I^u_1 = \langle -3u^{19}-26u^{18}+\cdots+2b+8,\ u^{19}+13u^{18}+\cdots+2a-25,\ u^{20}+8u^{19}+\cdots-10u-4\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{1}{2}u^{19} - \frac{13}{2}u^{18} + \cdots + \frac{59}{2}u + \frac{25}{2} \\ \frac{3}{2}u^{19} + 13u^{18} + \cdots - \frac{37}{2}u - 4 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{1}{4}u^{19} + \frac{3}{2}u^{18} + \cdots + \frac{3}{4}u + 1 \\ -\frac{1}{2}u^{19} - 3u^{18} + \cdots + \frac{3}{2}u + 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u^{19} + \frac{13}{2}u^{18} + \cdots + 11u + \frac{17}{2} \\ \frac{3}{2}u^{19} + 13u^{18} + \cdots - \frac{37}{2}u - 4 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{4}u^{19} + \frac{3}{2}u^{18} + \cdots - \frac{5}{4}u - 1 \\ \frac{1}{2}u^{19} + 3u^{18} + \cdots - \frac{1}{2}u - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{7}{4}u^{19} + \frac{25}{2}u^{18} + \cdots + \frac{9}{4}u + 3 \\ \frac{3}{2}u^{19} + 11u^{18} + \cdots - \frac{43}{2}u - 9 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{3}{4}u^{19} + \frac{9}{2}u^{18} + \cdots + \frac{1}{4}u + 3 \\ \frac{3}{2}u^{19} + 11u^{18} + \cdots - \frac{19}{2}u - 3 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{19} - \frac{11}{2}u^{18} + \cdots - 13u - \frac{21}{2} \\ -\frac{7}{2}u^{19} - 27u^{18} + \cdots + \frac{67}{2}u + 10 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{3}{2}u^{19} + \frac{21}{2}u^{18} + \cdots + \frac{9}{2}u + \frac{5}{2} \\ \frac{3}{2}u^{19} + 12u^{18} + \cdots - \frac{51}{2}u - 10 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= 3u^{19} + 21u^{18} + 95u^{17} + 306u^{16} + 777u^{15} + 1606u^{14} + 2750u^{13} + 3938u^{12} + 4673u^{11} + 4519u^{10} + 3361u^9 + 1582u^8 - 119u^7 - 1191u^6 - 1413u^5 - 1054u^4 - 527u^3 - 148u^2 - 6u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20}+29u^{19}+\cdots+6u+1$
c_2, c_6, c_{12}	$u^{20}-u^{19}+\cdots+3u^2-1$
c_3, c_{11}	$u^{20}-8u^{19}+\cdots+10u-4$
c_4, c_5, c_9	$u^{20}+11u^{19}+\cdots+352u+32$
c_7, c_{10}	$u^{20}+u^{19}+\cdots-u-1$
c_8	$u^{20}-20u^{18}+\cdots+363u+389$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 77y^{19} + \cdots - 30y + 1$
c_2, c_6, c_{12}	$y^{20} - 29y^{19} + \cdots - 6y + 1$
c_3, c_{11}	$y^{20} + 16y^{19} + \cdots - 124y + 16$
c_4, c_5, c_9	$y^{20} + 17y^{19} + \cdots - 8704y + 1024$
c_7, c_{10}	$y^{20} - 19y^{19} + \cdots - 11y + 1$
c_8	$y^{20} - 40y^{19} + \cdots - 327047y + 151321$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.307939+0.948375I$ $a=\ \ 0.05622+1.79329I$ $b=\ \ 1.20587-0.93158I$	$3.89445+4.62827I$	$-7.73780-0.37198I$
$u=-0.307939-0.948375I$ $a=\ \ 0.05622-1.79329I$ $b=\ \ 1.20587+0.93158I$	$3.89445-4.62827I$	$-7.73780+0.37198I$
$u=\ \ 0.186964+0.988512I$ $a=-0.089455+0.771960I$ $b=\ \ 0.364770-0.350879I$	$1.95473-1.84370I$	$-7.61677+4.71510I$
$u=\ \ 0.186964-0.988512I$ $a=-0.089455-0.771960I$ $b=\ \ 0.364770+0.350879I$	$1.95473+1.84370I$	$-7.61677-4.71510I$
$u=-0.219887+0.859832I$ $a=\ \ 0.26086-1.47452I$ $b=-1.050500+0.454707I$	$-0.445235+1.140740I$	$-12.74589-1.01888I$
$u=-0.219887-0.859832I$ $a=\ \ 0.26086+1.47452I$ $b=-1.050500-0.454707I$	$-0.445235-1.140740I$	$-12.74589+1.01888I$
$u=-1.165370+0.101289I$ $a=\ \ 0.249791-0.036181I$ $b=-1.44567-0.47752I$	$-10.71860-7.16687I$	$-14.7672+3.4591I$
$u=-1.165370-0.101289I$ $a=\ \ 0.249791+0.036181I$ $b=-1.44567+0.47752I$	$-10.71860+7.16687I$	$-14.7672-3.4591I$
$u=-1.17535$ $a=-0.236789$ $b=\ \ 1.58721$	-15.2605	-16.9350
$u=-0.319592+0.523784I$ $a=-0.734866+1.076110I$ $b=\ \ 0.821178+0.439010I$	$2.81143-1.78462I$	$-5.22189+4.40876I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.319592-0.523784I$ $a=-0.734866-1.076110I$ $b=\ \ 0.821178-0.439010I$	$2.81143+1.78462I$	$-5.22189-4.40876I$
$u=-0.62192+1.33439I$ $a=\ \ 0.48413-1.57383I$ $b=-1.48076+0.92864I$	$-6.9069+13.4360I$	$-11.74255-6.57313I$
$u=-0.62192-1.33439I$ $a=\ \ 0.48413+1.57383I$ $b=-1.48076-0.92864I$	$-6.9069-13.4360I$	$-11.74255+6.57313I$
$u=-0.61063+1.39810I$ $a=-0.81610+1.20565I$ $b=\ \ 1.46551-0.44107I$	$-10.94070+6.30161I$	$-14.3965-3.2767I$
$u=-0.61063-1.39810I$ $a=-0.81610-1.20565I$ $b=\ \ 1.46551+0.44107I$	$-10.94070-6.30161I$	$-14.3965+3.2767I$
$u=\ \ 0.09565+1.60341I$ $a=-0.332044-0.380939I$ $b=\ \ 0.073621+0.411439I$	$10.12870-1.84544I$	$-0.92402+4.93320I$
$u=\ \ 0.09565-1.60341I$ $a=-0.332044+0.380939I$ $b=\ \ 0.073621-0.411439I$	$10.12870+1.84544I$	$-0.92402-4.93320I$
$u=-0.57369+1.50037I$ $a=\ \ 0.895185-0.618003I$ $b=-1.119450-0.042363I$	$-5.72650-0.92873I$	$-13.76270+0.38685I$
$u=-0.57369-1.50037I$ $a=\ \ 0.895185+0.618003I$ $b=-1.119450+0.042363I$	$-5.72650+0.92873I$	$-13.76270-0.38685I$
$u=\ \ 0.248179$ $a=\ \ 1.28936$ $b=-0.256367$	-0.545579	-18.2350

II. $I_2^u = \langle 367u^4a^3 - 289u^4a^2 + \cdots + 163a - 69,\ -u^4a - 9u^4 + \cdots - 2a^3 + 3a^2,\ u^5 - u^4 + 2u^3 - u^2 + u - 1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} a \\ -1.80788a^3u^4 + 1.42365a^2u^4 + \cdots - 0.802956a + 0.339901 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -0.817734a^3u^4 + 1.02463a^2u^4 + \cdots - 0.556650a + 2.72906 \\ -\frac{8}{7}u^4a^2 - \frac{4}{7}u^4 + \cdots - \frac{6}{7}a^2 + \frac{4}{7} \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -1.80788a^3u^4 + 1.42365a^2u^4 + \cdots + 0.197044a + 0.339901 \\ -1.80788a^3u^4 + 1.42365a^2u^4 + \cdots - 0.802956a + 0.339901 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.31527a^3u^4 + 1.80296a^2u^4 + \cdots - 1.11823a + 2.16749 \\ -1.20197a^3u^4 + 1.03448a^2u^4 + \cdots - 0.950739a + 0.620690 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.945813a^3u^4 + 0.837438a^2u^4 + \cdots - 1.35468a - 1.21182 \\ 0.359606a^3u^4 + 0.492611a^2u^4 + \cdots + 0.00985222a + 0.581281 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.945813a^3u^4 - 0.837438a^2u^4 + \cdots + 1.35468a - 0.788177 \\ 0.128079a^3u^4 + 0.187192a^2u^4 + \cdots + 0.798030a - 0.0591133 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.945813a^3u^4 - 0.837438a^2u^4 + \cdots + 1.35468a + 0.211823 \\ 0.133005a^3u^4 - 0.399015a^2u^4 + \cdots + 0.674877a - 0.610837 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.945813a^3u^4 - 0.837438a^2u^4 + \cdots + 1.35468a + 0.211823 \\ -0.364532a^3u^4 + 0.0935961a^2u^4 + \cdots + 0.113300a - 0.0295567 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{492}{203}u^4a^3 + \frac{664}{203}u^4a^2 + \cdots - \frac{692}{203}a - \frac{2026}{203}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} + 25u^{19} + \cdots + 3332u + 10609$
c_2, c_6, c_{12}	$u^{20} - u^{19} + \cdots + 6u + 103$
c_3, c_{11}	$(u^5 + u^4 + 2u^3 + u^2 + u + 1)^4$
c_4, c_5, c_9	$(u^2 - u + 1)^{10}$
c_7, c_{10}	$u^{20} + 5u^{19} + \cdots - 8u + 1$
c_8	$u^{20} + u^{19} + \cdots + 1242u + 1549$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 53y^{19} + \cdots + 3723477956y + 112550881$
c_2, c_6, c_{12}	$y^{20} - 25y^{19} + \cdots - 3332y + 10609$
c_3, c_{11}	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^4$
c_4, c_5, c_9	$(y^2 + y + 1)^{10}$
c_7, c_{10}	$y^{20} - 5y^{19} + \cdots + 212y + 1$
c_8	$y^{20} - 33y^{19} + \cdots - 1381468y + 2399401$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.339110 + 0.822375I$ $a = -1.24082 + 0.82885I$ $b = -0.839233 + 0.066856I$	$-4.60570 - 0.49930I$	$-15.4849 - 0.9665I$
$u = -0.339110 + 0.822375I$ $a = 1.51588 + 1.67630I$ $b = -1.43083 - 1.67189I$	$-4.60570 + 3.56046I$	$-15.4849 - 7.8947I$
$u = -0.339110 + 0.822375I$ $a = 1.09190 - 2.13507I$ $b = 0.0324686 - 0.0684453I$	$-4.60570 + 3.56046I$	$-15.4849 - 7.8947I$
$u = -0.339110 + 0.822375I$ $a = -0.46038 - 2.85787I$ $b = 0.03124 + 2.01433I$	$-4.60570 - 0.49930I$	$-15.4849 - 0.9665I$
$u = -0.339110 - 0.822375I$ $a = -1.24082 - 0.82885I$ $b = -0.839233 - 0.066856I$	$-4.60570 + 0.49930I$	$-15.4849 + 0.9665I$
$u = -0.339110 - 0.822375I$ $a = 1.51588 - 1.67630I$ $b = -1.43083 + 1.67189I$	$-4.60570 - 3.56046I$	$-15.4849 + 7.8947I$
$u = -0.339110 - 0.822375I$ $a = 1.09190 + 2.13507I$ $b = 0.0324686 + 0.0684453I$	$-4.60570 - 3.56046I$	$-15.4849 + 7.8947I$
$u = -0.339110 - 0.822375I$ $a = -0.46038 + 2.85787I$ $b = 0.03124 - 2.01433I$	$-4.60570 + 0.49930I$	$-15.4849 + 0.9665I$
$u = 0.766826$ $a = 0.651697 + 0.410335I$ $b = 1.034330 - 0.571171I$	$-2.53372 + 2.02988I$	$-14.5189 - 3.4641I$
$u = 0.766826$ $a = 0.651697 - 0.410335I$ $b = 1.034330 + 0.571171I$	$-2.53372 - 2.02988I$	$-14.5189 + 3.4641I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.766826$ $a = -0.055956 + 0.621518I$ $b = -1.292890 + 0.123332I$	$-2.53372 + 2.02988I$	$-14.5189 - 3.4641I$
$u = 0.766826$ $a = -0.055956 - 0.621518I$ $b = -1.292890 - 0.123332I$	$-2.53372 - 2.02988I$	$-14.5189 + 3.4641I$
$u = 0.455697 + 1.200150I$ $a = -0.846255 - 0.412340I$ $b = 1.265170 - 0.048633I$	$0.93776 - 2.37095I$	$-11.25569 + 0.03448I$
$u = 0.455697 + 1.200150I$ $a = 0.429720 + 1.227490I$ $b = -0.744138 - 0.292701I$	$0.93776 - 2.37095I$	$-11.25569 + 0.03448I$
$u = 0.455697 + 1.200150I$ $a = 0.11602 - 1.56704I$ $b = 1.022890 + 0.683808I$	$0.93776 - 6.43072I$	$-11.25569 + 6.96269I$
$u = 0.455697 + 1.200150I$ $a = 0.79819 + 1.52019I$ $b = -1.57901 - 0.96437I$	$0.93776 - 6.43072I$	$-11.25569 + 6.96269I$
$u = 0.455697 - 1.200150I$ $a = -0.846255 + 0.412340I$ $b = 1.265170 + 0.048633I$	$0.93776 + 2.37095I$	$-11.25569 - 0.03448I$
$u = 0.455697 - 1.200150I$ $a = 0.429720 - 1.227490I$ $b = -0.744138 + 0.292701I$	$0.93776 + 2.37095I$	$-11.25569 - 0.03448I$
$u = 0.455697 - 1.200150I$ $a = 0.11602 + 1.56704I$ $b = 1.022890 - 0.683808I$	$0.93776 + 6.43072I$	$-11.25569 - 6.96269I$
$u = 0.455697 - 1.200150I$ $a = 0.79819 - 1.52019I$ $b = -1.57901 + 0.96437I$	$0.93776 + 6.43072I$	$-11.25569 - 6.96269I$

III. $I^u_3 =$ $\langle u^{12}-2u^{11}+\cdots+b-1,\ -4u^{12}+12u^{11}+\cdots+3a-5,\ u^{13}-3u^{12}+\cdots+11u-3\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{4}{3}u^{12} - 4u^{11} + \cdots - \frac{31}{3}u + \frac{5}{3} \\ -u^{12} + 2u^{11} + \cdots - u + 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -\frac{2}{3}u^{12} + 3u^{11} + \cdots + \frac{14}{3}u + \frac{2}{3} \\ u^{12} - 3u^{11} + \cdots - 3u + 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{1}{3}u^{12} - 2u^{11} + \cdots - \frac{34}{3}u + \frac{8}{3} \\ -u^{12} + 2u^{11} + \cdots - u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{3}u^{12} + \frac{2}{3}u^{10} + \cdots + \frac{8}{3}u + \frac{2}{3} \\ u^{12} - 3u^{11} + \cdots - 2u + 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -u^3 + u^2 - 2u + 1 \\ u^{12} - 3u^{11} + \cdots - 15u^3 + 4u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -\frac{1}{3}u^{12} + u^{11} + \cdots + \frac{4}{3}u - \frac{2}{3} \\ -u^{10} + 2u^9 + \cdots + 2u - 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{2}{3}u^{12} - 2u^{11} + \cdots - \frac{17}{3}u + \frac{7}{3} \\ -2u^{11} + 4u^{10} + \cdots - 5u + 2 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{1}{3}u^{12} - u^{11} + \cdots - \frac{19}{3}u + \frac{5}{3} \\ -u^{12} + 3u^{11} + \cdots - 6u^2 + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^{12} + 10u^{11} - 33u^{10} + 69u^9 - 123u^8 + 178u^7 - 216u^6 + 227u^5 - 200u^4 + 145u^3 - 88u^2 + 40u - 24$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{13} - 13u^{12} + \cdots + 8u - 1$
c_2	$u^{13} - u^{12} + \cdots + 4u^2 - 1$
c_3	$u^{13} + 3u^{12} + \cdots + 11u + 3$
c_4, c_5	$u^{13} + 8u^{11} + \cdots + 5u - 1$
c_6, c_{12}	$u^{13} + u^{12} + \cdots - 4u^2 + 1$
c_7	$u^{13} + u^{12} - u^{11} - u^{10} + 4u^9 - 5u^7 + 2u^5 + 4u^3 - 3u - 1$
c_8	$u^{13} - 6u^{11} + \cdots + 3u - 1$
c_9	$u^{13} + 8u^{11} + \cdots + 5u + 1$
c_{10}	$u^{13} - u^{12} - u^{11} + u^{10} + 4u^9 - 5u^7 + 2u^5 + 4u^3 - 3u + 1$
c_{11}	$u^{13} - 3u^{12} + \cdots + 11u - 3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{13} - 21y^{12} + \cdots + 4y - 1$
c_2, c_6, c_{12}	$y^{13} - 13y^{12} + \cdots + 8y - 1$
c_3, c_{11}	$y^{13} + 13y^{12} + \cdots - 29y - 9$
c_4, c_5, c_9	$y^{13} + 16y^{12} + \cdots + 11y - 1$
c_7, c_{10}	$y^{13} - 3y^{12} + \cdots + 9y - 1$
c_8	$y^{13} - 12y^{12} + \cdots + 41y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.311964 + 1.093350I$ $a = 0.774593 - 1.109310I$ $b = -0.010328 + 0.900690I$	$-2.95271 - 0.68897I$	$-9.08547 + 0.28804I$
$u = -0.311964 - 1.093350I$ $a = 0.774593 + 1.109310I$ $b = -0.010328 - 0.900690I$	$-2.95271 + 0.68897I$	$-9.08547 - 0.28804I$
$u = -0.183411 + 0.836579I$ $a = -0.25418 + 2.22881I$ $b = -0.776793 - 1.074250I$	$-4.00352 + 2.67216I$	$-9.27660 - 0.66182I$
$u = -0.183411 - 0.836579I$ $a = -0.25418 - 2.22881I$ $b = -0.776793 + 1.074250I$	$-4.00352 - 2.67216I$	$-9.27660 + 0.66182I$
$u = 0.693444 + 0.482308I$ $a = -0.323041 - 0.669219I$ $b = 1.008100 - 0.435989I$	$1.92069 + 1.38967I$	$-14.4640 - 0.3073I$
$u = 0.693444 - 0.482308I$ $a = -0.323041 + 0.669219I$ $b = 1.008100 + 0.435989I$	$1.92069 - 1.38967I$	$-14.4640 + 0.3073I$
$u = 0.444029 + 1.081590I$ $a = -0.07761 - 1.60889I$ $b = 1.22506 + 0.94731I$	$3.77211 - 5.65024I$	$-8.73340 + 7.27407I$
$u = 0.444029 - 1.081590I$ $a = -0.07761 + 1.60889I$ $b = 1.22506 - 0.94731I$	$3.77211 + 5.65024I$	$-8.73340 - 7.27407I$
$u = 0.381547 + 1.261190I$ $a = 0.456024 + 1.005740I$ $b = -0.955954 - 0.399007I$	$1.15315 - 3.75548I$	$-9.16700 + 5.96823I$
$u = 0.381547 - 1.261190I$ $a = 0.456024 - 1.005740I$ $b = -0.955954 + 0.399007I$	$1.15315 + 3.75548I$	$-9.16700 - 5.96823I$

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.660856$ $a = -0.486065$ $b = -0.947145$	-2.65768	-15.1330
$u = 0.14593 + 1.67508I$ $a = -0.499419 - 0.221002I$ $b = 0.483481 - 0.069018I$	$9.66379 - 1.70084I$	$-17.2072 - 0.2320I$
$u = 0.14593 - 1.67508I$ $a = -0.499419 + 0.221002I$ $b = 0.483481 + 0.069018I$	$9.66379 + 1.70084I$	$-17.2072 + 0.2320I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{13}-13u^{12}+\cdots+8u-1)(u^{20}+25u^{19}+\cdots+3332u+10609)$ $\cdot\,(u^{20}+29u^{19}+\cdots+6u+1)$
c_2	$(u^{13}-u^{12}+\cdots+4u^2-1)(u^{20}-u^{19}+\cdots+3u^2-1)$ $\cdot\,(u^{20}-u^{19}+\cdots+6u+103)$
c_3	$((u^5+u^4+2u^3+u^2+u+1)^4)(u^{13}+3u^{12}+\cdots+11u+3)$ $\cdot\,(u^{20}-8u^{19}+\cdots+10u-4)$
c_4, c_5	$((u^2-u+1)^{10})(u^{13}+8u^{11}+\cdots+5u-1)$ $\cdot\,(u^{20}+11u^{19}+\cdots+352u+32)$
c_6, c_{12}	$(u^{13}+u^{12}+\cdots-4u^2+1)(u^{20}-u^{19}+\cdots+3u^2-1)$ $\cdot\,(u^{20}-u^{19}+\cdots+6u+103)$
c_7	$(u^{13}+u^{12}-u^{11}-u^{10}+4u^9-5u^7+2u^5+4u^3-3u-1)$ $\cdot\,(u^{20}+u^{19}+\cdots-u-1)(u^{20}+5u^{19}+\cdots-8u+1)$
c_8	$(u^{13}-6u^{11}+\cdots+3u-1)(u^{20}-20u^{18}+\cdots+363u+389)$ $\cdot\,(u^{20}+u^{19}+\cdots+1242u+1549)$
c_9	$((u^2-u+1)^{10})(u^{13}+8u^{11}+\cdots+5u+1)$ $\cdot\,(u^{20}+11u^{19}+\cdots+352u+32)$
c_{10}	$(u^{13}-u^{12}-u^{11}+u^{10}+4u^9-5u^7+2u^5+4u^3-3u+1)$ $\cdot\,(u^{20}+u^{19}+\cdots-u-1)(u^{20}+5u^{19}+\cdots-8u+1)$
c_{11}	$((u^5+u^4+2u^3+u^2+u+1)^4)(u^{13}-3u^{12}+\cdots+11u-3)$ $\cdot\,(u^{20}-8u^{19}+\cdots+10u-4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{13} - 21y^{12} + \cdots + 4y - 1)(y^{20} - 77y^{19} + \cdots - 30y + 1)$ $\cdot\, (y^{20} - 53y^{19} + \cdots + 3723477956y + 112550881)$
c_2, c_6, c_{12}	$(y^{13} - 13y^{12} + \cdots + 8y - 1)(y^{20} - 29y^{19} + \cdots - 6y + 1)$ $\cdot\, (y^{20} - 25y^{19} + \cdots - 3332y + 10609)$
c_3, c_{11}	$((y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^4)(y^{13} + 13y^{12} + \cdots - 29y - 9)$ $\cdot\, (y^{20} + 16y^{19} + \cdots - 124y + 16)$
c_4, c_5, c_9	$((y^2 + y + 1)^{10})(y^{13} + 16y^{12} + \cdots + 11y - 1)$ $\cdot\, (y^{20} + 17y^{19} + \cdots - 8704y + 1024)$
c_7, c_{10}	$(y^{13} - 3y^{12} + \cdots + 9y - 1)(y^{20} - 19y^{19} + \cdots - 11y + 1)$ $\cdot\, (y^{20} - 5y^{19} + \cdots + 212y + 1)$
c_8	$(y^{13} - 12y^{12} + \cdots + 41y - 1)(y^{20} - 40y^{19} + \cdots - 327047y + 151321)$ $\cdot\, (y^{20} - 33y^{19} + \cdots - 1381468y + 2399401)$