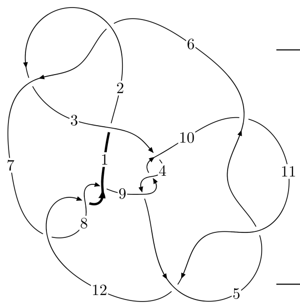
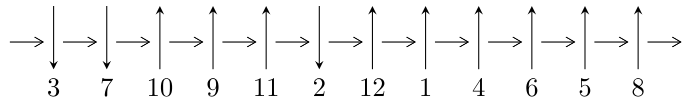
$12a_{0634}$ ($K12a_{0634}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -2u^{24} - 31u^{22} + \cdots + 16b - 6,\ -u^{24} + u^{23} + \cdots + 32a - 22,\ u^{25} + 15u^{23} + \cdots - 2u - 2 \rangle$$

$$\begin{aligned} I_2^u = \langle &131149683608665u^{33} - 237748805942401u^{32} + \cdots + 4229403894019872b - 1000700151544160, \\ &218876053189111u^{33} - 464080060606921u^{32} + \cdots + 1409801298006624a - 1994609262976856, \\ &u^{34} - 2u^{33} + \cdots - 36u + 8 \rangle \end{aligned}$$

$$I_3^u = \langle -u^2a + au + u^2 + b,\ -2u^2a + 2a^2 + 3u^2 - 6a + u + 7,\ u^3 + 2u - 1 \rangle$$

$$I_4^u = \langle -u^2 + b - 1,\ a - u,\ u^3 + 2u - 1 \rangle$$

$$I_5^u = \langle a^3u + a^3 + 3a^2u + 2a^2 + 3au + b + 5a + u + 3,\ 2a^4 + a^3u + 5a^3 - 2a^2u + 8a^2 - 3au + 5a - u + 1,\ u^2 + 1 \rangle$$

$$\begin{aligned} I_6^u = \langle &-6u^3a^2 - 9a^2u^2 + 11u^3a + 5a^2u - 5u^2a + 30u^3 + 12a^2 - 2au + 2u^2 + 43b + 21a + 18u + 26, \\ &2u^3a^2 + 2u^3a + a^3 + 2a^2u + u^2a + 4u^3 + 2a^2 + au - u^2 + 2a + 6u,\ u^4 + u^3 + 2u^2 + 2u + 1 \rangle \end{aligned}$$

$$I_7^u = \langle b - 1,\ 6a + u - 3,\ u^2 + 3 \rangle$$

$$I_1^v = \langle a,\ b - 1,\ v - 1 \rangle$$

* 8 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 91 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. $\boldsymbol{I_1^u = \langle -2u^{24} - 31u^{22} + \cdots + 16b - 6,\ -u^{24} + u^{23} + \cdots + 32a - 22,\ u^{25} + 15u^{23} + \cdots - 2u - 2\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{1}{32}u^{24} - \frac{1}{32}u^{23} + \cdots + \frac{5}{4}u + \frac{11}{16} \\ \frac{1}{8}u^{24} + \frac{31}{16}u^{22} + \cdots - \frac{3}{2}u + \frac{3}{8} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{32}u^{24} - \frac{1}{32}u^{23} + \cdots + \frac{5}{4}u + \frac{11}{16} \\ -\frac{3}{16}u^{24} + \frac{1}{8}u^{23} + \cdots + \frac{9}{8}u - \frac{7}{8} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -0.156250u^{24} + 0.0937500u^{23} + \cdots + 2.37500u - 0.187500 \\ -\frac{3}{16}u^{24} + \frac{1}{8}u^{23} + \cdots + \frac{9}{8}u - \frac{7}{8} \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ \frac{1}{8}u^{23} + \frac{7}{4}u^{21} + \cdots - \frac{1}{4}u - \frac{1}{4} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ \frac{1}{8}u^{24} + \frac{7}{4}u^{22} + \cdots - \frac{1}{4}u^2 + \frac{3}{4}u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} \frac{1}{32}u^{24} - \frac{3}{32}u^{23} + \cdots - \frac{11}{8}u - \frac{1}{16} \\ \frac{1}{16}u^{24} + \frac{1}{16}u^{23} + \cdots + \frac{1}{2}u - \frac{1}{8} \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} u^3 + 2u \\ \frac{1}{8}u^{24} + \frac{7}{4}u^{22} + \cdots - \frac{1}{4}u^2 + \frac{3}{4}u \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{7}{8}u^{24} + \frac{3}{8}u^{23} + \cdots + \frac{1}{2}u + \frac{7}{4}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{25} + 10u^{24} + \cdots + 1455u + 169$
c_2, c_6	$u^{25} - 6u^{24} + \cdots + 57u - 13$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$u^{25} + 15u^{23} + \cdots - 2u - 2$
c_7, c_8, c_{12}	$u^{25} + 6u^{24} + \cdots - 3u - 13$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{25} + 14y^{24} + \cdots + 367199y - 28561$
c_2, c_6	$y^{25} - 10y^{24} + \cdots + 1455y - 169$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y^{25} + 30y^{24} + \cdots - 24y - 4$
c_7, c_8, c_{12}	$y^{25} - 26y^{24} + \cdots + 191y - 169$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.755535 + 0.415934I$ $a = -0.08824 - 1.55070I$ $b = -1.036580 + 0.642790I$	$5.29214 + 6.95092I$	$9.63817 - 7.49283I$
$u = 0.755535 - 0.415934I$ $a = -0.08824 + 1.55070I$ $b = -1.036580 - 0.642790I$	$5.29214 - 6.95092I$	$9.63817 + 7.49283I$
$u = -0.781688 + 0.222090I$ $a = 0.567778 - 0.932154I$ $b = -0.523390 + 0.782479I$	$6.80658 - 1.60733I$	$12.68937 + 1.64186I$
$u = -0.781688 - 0.222090I$ $a = 0.567778 + 0.932154I$ $b = -0.523390 - 0.782479I$	$6.80658 + 1.60733I$	$12.68937 - 1.64186I$
$u = 0.048749 + 1.304960I$ $a = 0.055343 - 0.974408I$ $b = -0.941899 + 1.022970I$	$1.65681 + 3.64991I$	$0.77498 - 3.11405I$
$u = 0.048749 - 1.304960I$ $a = 0.055343 + 0.974408I$ $b = -0.941899 - 1.022970I$	$1.65681 - 3.64991I$	$0.77498 + 3.11405I$
$u = 0.071780 + 0.652870I$ $a = 0.451606 - 0.184043I$ $b = 0.898942 + 0.773875I$	$4.71249 - 2.92993I$	$11.02910 + 1.21081I$
$u = 0.071780 - 0.652870I$ $a = 0.451606 + 0.184043I$ $b = 0.898942 - 0.773875I$	$4.71249 + 2.92993I$	$11.02910 - 1.21081I$
$u = -0.570291 + 0.288945I$ $a = 0.18281 + 2.07363I$ $b = -0.957814 - 0.478527I$	$-0.33137 - 3.73744I$	$6.36857 + 8.33061I$
$u = -0.570291 - 0.288945I$ $a = 0.18281 - 2.07363I$ $b = -0.957814 + 0.478527I$	$-0.33137 + 3.73744I$	$6.36857 - 8.33061I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.09300 + 1.43892I$ $a = 0.448195 + 0.914529I$ $b = -0.567898 - 0.881693I$	$-7.75327 - 0.62404I$	$1.11905 + 1.82325I$
$u = 0.09300 - 1.43892I$ $a = 0.448195 - 0.914529I$ $b = -0.567898 + 0.881693I$	$-7.75327 + 0.62404I$	$1.11905 - 1.82325I$
$u = 0.34989 + 1.44000I$ $a = 0.447471 + 0.624414I$ $b = -0.241733 - 1.058110I$	$-3.68401 + 9.94366I$	$4.37752 - 5.16617I$
$u = 0.34989 - 1.44000I$ $a = 0.447471 - 0.624414I$ $b = -0.241733 + 1.058110I$	$-3.68401 - 9.94366I$	$4.37752 + 5.16617I$
$u = 0.32103 + 1.50150I$ $a = -0.46525 - 1.45818I$ $b = -1.198590 + 0.622421I$	$-12.0801 + 10.8715I$	$-1.24061 - 6.62726I$
$u = 0.32103 - 1.50150I$ $a = -0.46525 + 1.45818I$ $b = -1.198590 - 0.622421I$	$-12.0801 - 10.8715I$	$-1.24061 + 6.62726I$
$u = -0.40263 + 1.50474I$ $a = -0.57474 + 1.36291I$ $b = -1.262700 - 0.622947I$	$-6.8511 - 15.9422I$	$2.15332 + 8.18122I$
$u = -0.40263 - 1.50474I$ $a = -0.57474 - 1.36291I$ $b = -1.262700 + 0.622947I$	$-6.8511 + 15.9422I$	$2.15332 - 8.18122I$
$u = -0.116143 + 0.395232I$ $a = 0.523724 + 0.083480I$ $b = 0.862091 - 0.296810I$	$-1.35428 + 1.12969I$	$0.98953 - 1.48650I$
$u = -0.116143 - 0.395232I$ $a = 0.523724 - 0.083480I$ $b = 0.862091 + 0.296810I$	$-1.35428 - 1.12969I$	$0.98953 + 1.48650I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.13068 + 1.60153I$ $a = 0.436301 - 0.037125I$ $b = 1.275520 + 0.193623I$	$-15.0829 + 1.6460I$	$-4.49592 - 1.15064I$
$u = 0.13068 - 1.60153I$ $a = 0.436301 + 0.037125I$ $b = 1.275520 - 0.193623I$	$-15.0829 - 1.6460I$	$-4.49592 + 1.15064I$
$u = 0.369219$ $a = 2.02103$ $b = -0.505202$	0.738512	14.6480
$u = -0.08452 + 1.78825I$ $a = 0.504494 + 0.068165I$ $b = 0.946646 - 0.263021I$	$-12.82360 + 1.06304I$	$4.27303 - 7.22736I$
$u = -0.08452 - 1.78825I$ $a = 0.504494 - 0.068165I$ $b = 0.946646 + 0.263021I$	$-12.82360 - 1.06304I$	$4.27303 + 7.22736I$

II. $I_2^u =$
$\langle 1.31\times10^{14}u^{33}-2.38\times10^{14}u^{32}+\cdots+4.23\times10^{15}b-1.00\times10^{15},\ 2.19\times10^{14}u^{33}-4.64\times10^{14}u^{32}+\cdots+1.41\times10^{15}a-1.99\times10^{15},\ u^{34}-2u^{33}+\cdots-36u+8\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.155253u^{33} + 0.329181u^{32} + \cdots - 29.1112u + 1.41482 \\ -0.0310090u^{33} + 0.0562133u^{32} + \cdots + 2.78205u + 0.236605 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.0670221u^{33} - 0.211355u^{32} + \cdots + 28.1192u - 2.65059 \\ -0.0233286u^{33} + 0.0485749u^{32} + \cdots - 3.94112u + 0.296004 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.0436936u^{33} - 0.162780u^{32} + \cdots + 24.1780u - 2.35459 \\ -0.0233286u^{33} + 0.0485749u^{32} + \cdots - 3.94112u + 0.296004 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} -0.164018u^{33} + 0.329267u^{32} + \cdots - 9.73795u - 1.66269 \\ -0.0499240u^{33} + 0.0898833u^{32} + \cdots - 1.35647u + 1.00985 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.123769u^{33} - 0.297461u^{32} + \cdots + 33.8173u - 5.81214 \\ 0.0111960u^{33} + 0.0150363u^{32} + \cdots - 3.77992u + 0.912751 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0.173662u^{33} - 0.284141u^{32} + \cdots + 14.3998u - 0.525050 \\ -0.00389825u^{33} + 0.0271836u^{32} + \cdots - 1.92616u + 0.497794 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 0.134965u^{33} - 0.282425u^{32} + \cdots + 28.0374u - 4.89939 \\ -0.0361733u^{33} + 0.110465u^{32} + \cdots - 6.82518u + 1.61157 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes
$= -\frac{11998428764201}{44056290562707}u^{33} + \frac{351904123111283}{88112581125414}u^{32} + \cdots + \frac{1450723211244922}{44056290562707}u + \frac{1038964396604 29}{44056290562707}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^{17}+8u^{16}+\cdots+3u+1)^2$
c_2, c_6	$(u^{17}+2u^{16}+\cdots-u-1)^2$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$u^{34}-2u^{33}+\cdots-36u+8$
c_7, c_8, c_{12}	$(u^{17}-2u^{16}+\cdots+3u-1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^{17} + 4y^{16} + \cdots - 13y - 1)^2$
c_2, c_6	$(y^{17} - 8y^{16} + \cdots + 3y - 1)^2$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y^{34} + 28y^{33} + \cdots + 2192y + 64$
c_7, c_8, c_{12}	$(y^{17} - 16y^{16} + \cdots + 19y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.864072 + 0.421442I$ $a = -0.60307 + 1.70997I$ $b = 1.130680 - 0.513073I$	$-5.86965 + 6.57063I$	$0.73995 - 6.43452I$
$u = 0.864072 - 0.421442I$ $a = -0.60307 - 1.70997I$ $b = 1.130680 + 0.513073I$	$-5.86965 - 6.57063I$	$0.73995 + 6.43452I$
$u = 0.701574 + 0.772236I$ $a = 0.671036 + 0.299184I$ $b = -1.128570 - 0.359117I$	$-6.94910 - 1.22724I$	$-2.14847 + 0.85505I$
$u = 0.701574 - 0.772236I$ $a = 0.671036 - 0.299184I$ $b = -1.128570 + 0.359117I$	$-6.94910 + 1.22724I$	$-2.14847 - 0.85505I$
$u = -0.400299 + 0.849296I$ $a = 0.488205 - 0.936880I$ $b = 0.796399 + 0.723427I$	$4.74481 - 2.71165I$	$9.84242 + 3.13710I$
$u = -0.400299 - 0.849296I$ $a = 0.488205 + 0.936880I$ $b = 0.796399 - 0.723427I$	$4.74481 + 2.71165I$	$9.84242 - 3.13710I$
$u = -1.015190 + 0.363118I$ $a = -0.42443 - 1.39736I$ $b = 1.172120 + 0.583556I$	$-0.88663 - 10.83370I$	$4.89378 + 7.41261I$
$u = -1.015190 - 0.363118I$ $a = -0.42443 + 1.39736I$ $b = 1.172120 - 0.583556I$	$-0.88663 + 10.83370I$	$4.89378 - 7.41261I$
$u = 0.882304 + 0.259295I$ $a = -0.201550 - 1.387080I$ $b = 0.288739 + 0.863831I$	$1.75994 + 5.51158I$	$8.25126 - 3.84490I$
$u = 0.882304 - 0.259295I$ $a = -0.201550 + 1.387080I$ $b = 0.288739 - 0.863831I$	$1.75994 - 5.51158I$	$8.25126 + 3.84490I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.231948 + 1.077680I$ $a = -0.17884 + 1.65758I$ $b = -0.867068$	-4.54799	$-4.68792 + 0.I$
$u = -0.231948 - 1.077680I$ $a = -0.17884 - 1.65758I$ $b = -0.867068$	-4.54799	$-4.68792 + 0.I$
$u = -0.001691 + 1.105180I$ $a = -0.516445 + 0.866608I$ $b = 0.621791 - 0.419413I$	$-1.98005 + 1.46955I$	$7.63583 - 4.66528I$
$u = -0.001691 - 1.105180I$ $a = -0.516445 - 0.866608I$ $b = 0.621791 + 0.419413I$	$-1.98005 - 1.46955I$	$7.63583 + 4.66528I$
$u = 0.553439 + 1.087560I$ $a = -0.737070 - 0.832523I$ $b = -0.374678 + 0.520641I$	$-0.670307 - 0.433874I$	$6.56834 - 0.87540I$
$u = 0.553439 - 1.087560I$ $a = -0.737070 + 0.832523I$ $b = -0.374678 - 0.520641I$	$-0.670307 + 0.433874I$	$6.56834 + 0.87540I$
$u = -0.815743 + 0.977729I$ $a = 0.365441 - 0.177204I$ $b = -1.072950 + 0.498433I$	$-2.67943 + 4.64771I$	$3.56085 - 4.11695I$
$u = -0.815743 - 0.977729I$ $a = 0.365441 + 0.177204I$ $b = -1.072950 - 0.498433I$	$-2.67943 - 4.64771I$	$3.56085 + 4.11695I$
$u = 0.510396 + 0.397212I$ $a = -0.577773 + 0.030688I$ $b = 0.796399 + 0.723427I$	$4.74481 - 2.71165I$	$9.84242 + 3.13710I$
$u = 0.510396 - 0.397212I$ $a = -0.577773 - 0.030688I$ $b = 0.796399 - 0.723427I$	$4.74481 + 2.71165I$	$9.84242 - 3.13710I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.281426 + 1.352580I$ $a = -0.239793 - 0.110964I$ $b = -0.374678 - 0.520641I$	$-0.670307 + 0.433874I$	$6.56834 + 0.87540I$
$u = 0.281426 - 1.352580I$ $a = -0.239793 + 0.110964I$ $b = -0.374678 + 0.520641I$	$-0.670307 - 0.433874I$	$6.56834 - 0.87540I$
$u = -0.303439 + 1.375590I$ $a = -0.284613 + 0.260893I$ $b = 0.288739 - 0.863831I$	$1.75994 - 5.51158I$	$8.25126 + 3.84490I$
$u = -0.303439 - 1.375590I$ $a = -0.284613 - 0.260893I$ $b = 0.288739 + 0.863831I$	$1.75994 + 5.51158I$	$8.25126 - 3.84490I$
$u = 0.04104 + 1.42314I$ $a = -1.165140 - 0.532963I$ $b = -1.128570 + 0.359117I$	$-6.94910 + 1.22724I$	$-2.14847 - 0.85505I$
$u = 0.04104 - 1.42314I$ $a = -1.165140 + 0.532963I$ $b = -1.128570 - 0.359117I$	$-6.94910 - 1.22724I$	$-2.14847 + 0.85505I$
$u = -0.20733 + 1.42614I$ $a = 0.93419 - 1.28605I$ $b = 1.130680 + 0.513073I$	$-5.86965 - 6.57063I$	$0.73995 + 6.43452I$
$u = -0.20733 - 1.42614I$ $a = 0.93419 + 1.28605I$ $b = 1.130680 - 0.513073I$	$-5.86965 + 6.57063I$	$0.73995 - 6.43452I$
$u = 0.29669 + 1.49249I$ $a = 0.89771 + 1.10113I$ $b = 1.172120 - 0.583556I$	$-0.88663 + 10.83370I$	$4.89378 - 7.41261I$
$u = 0.29669 - 1.49249I$ $a = 0.89771 - 1.10113I$ $b = 1.172120 + 0.583556I$	$-0.88663 - 10.83370I$	$4.89378 + 7.41261I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.16100 + 1.54040I$ $a = -0.966662 + 0.555173I$ $b = -1.072950 - 0.498433I$	$-2.67943 - 4.64771I$	$3.56085 + 4.11695I$
$u = -0.16100 - 1.54040I$ $a = -0.966662 - 0.555173I$ $b = -1.072950 + 0.498433I$	$-2.67943 + 4.64771I$	$3.56085 - 4.11695I$
$u = 0.005683 + 0.262839I$ $a = -3.96119 - 3.25601I$ $b = 0.621791 + 0.419413I$	$-1.98005 - 1.46955I$	$7.63583 + 4.66528I$
$u = 0.005683 - 0.262839I$ $a = -3.96119 + 3.25601I$ $b = 0.621791 - 0.419413I$	$-1.98005 + 1.46955I$	$7.63583 - 4.66528I$

III. $\boldsymbol{I_3^u = \langle -u^2a + au + u^2 + b,\ -2u^2a + 2a^2 + 3u^2 - 6a + u + 7,\ u^3 + 2u - 1\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^2 + 4u + 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^6 - 7y^5 + 25y^4 - 13y^3 + 23y^2 + 2y + 1$
c_2, c_6, c_7 c_8, c_{12}	$y^6 - 3y^5 + y^4 + 3y^3 + 3y^2 - 2y + 1$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$(y^3 + 4y^2 + 4y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.22670 + 1.46771I$ $a = \quad 0.493675 - 0.712154I$ $b = -0.342537 + 0.948428I$	$-9.44074 - 5.13794I$	$0.68207 + 3.20902I$
$u = -0.22670 + 1.46771I$ $a = \quad 0.403540 + 0.046697I$ $b = \quad 1.44532 - 0.28297I$	$-9.44074 - 5.13794I$	$0.68207 + 3.20902I$
$u = -0.22670 - 1.46771I$ $a = \quad 0.493675 + 0.712154I$ $b = -0.342537 - 0.948428I$	$-9.44074 + 5.13794I$	$0.68207 - 3.20902I$
$u = -0.22670 - 1.46771I$ $a = \quad 0.403540 - 0.046697I$ $b = \quad 1.44532 + 0.28297I$	$-9.44074 + 5.13794I$	$0.68207 - 3.20902I$
$u = \quad 0.453398$ $a = \quad 1.60278 + 1.21084I$ $b = -0.602785 - 0.300080I$	0.787199	12.6360
$u = \quad 0.453398$ $a = \quad 1.60278 - 1.21084I$ $b = -0.602785 + 0.300080I$	0.787199	12.6360

IV. $\boldsymbol{I^u_4 = \langle -u^2 + b - 1,\ a - u,\ u^3 + 2u - 1\rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

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

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

$$a_6 = \begin{pmatrix} 1 \\ u - 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ -u + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^2 + 1 \\ -u \end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^2 + 4u + 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^3 + y^2 + y - 16$
c_2, c_6, c_7 c_8, c_{12}	$y^3 - 3y^2 + 5y - 4$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y^3 + 4y^2 + 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.22670 + 1.46771I$ $a = -0.22670 + 1.46771I$ $b = -1.102790 - 0.665457I$	$-9.44074 - 5.13794I$	$0.68207 + 3.20902I$
$u = -0.22670 - 1.46771I$ $a = -0.22670 - 1.46771I$ $b = -1.102790 + 0.665457I$	$-9.44074 + 5.13794I$	$0.68207 - 3.20902I$
$u = 0.453398$ $a = 0.453398$ $b = 1.20557$	0.787199	12.6360

V. $\boldsymbol{I^u_5 = \langle a^3u + 3a^2u + \cdots + 5a + 3,\ a^3u - 2a^2u + \cdots + 5a + 1,\ u^2 + 1\rangle}$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} -a \\ -3a^3u - a^3 - 7a^2u - 8au - 5a - 3u - 3 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -3a^3u - a^3 - 7a^2u - 8au - 6a - 3u - 3 \\ -3a^3u - a^3 - 7a^2u - 8au - 5a - 3u - 3 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1 \\ 2a^3u - 2a^3 + 2a^2u - 6a^2 + 6au - 4a + 3u - 2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u \\ 2a^3u + 2a^3 + 6a^2u + 2a^2 + 4au + 6a + 3u + 3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 3a^3u + a^3 + 7a^2u + 8au + 6a + 3u + 3 \\ 2a^3u + 2a^3 + 5a^2u + 3a^2 + 4au + 9a + 2u + 4 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ 2a^3u + 2a^3 + 6a^2u + 2a^2 + 4au + 6a + 2u + 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 8a^3u + 8a^3 + 20a^2u + 12a^2 + 12au + 32a + 16$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^4+5y^3+7y^2+2y+1)^2$
c_2, c_6	$(y^4-y^3+3y^2-2y+1)^2$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$(y+1)^8$
c_7, c_8, c_{12}	$(y^4-5y^3+7y^2-2y+1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -0.120947 + 1.161380I$ $b = 0.911292 - 0.851808I$	$3.50087 + 3.16396I$	$3.82674 - 2.56480I$
$u = 1.000000I$ $a = -0.557947 - 0.114099I$ $b = -0.720342 + 0.351808I$	$-3.50087 + 1.41510I$	$0.17326 - 4.90874I$
$u = 1.000000I$ $a = -0.436506 + 0.194538I$ $b = -0.911292 - 0.851808I$	$3.50087 - 3.16396I$	$3.82674 + 2.56480I$
$u = 1.000000I$ $a = -1.38460 - 1.74182I$ $b = 0.720342 + 0.351808I$	$-3.50087 - 1.41510I$	$0.17326 + 4.90874I$
$u = -1.000000I$ $a = -0.120947 - 1.161380I$ $b = 0.911292 + 0.851808I$	$3.50087 - 3.16396I$	$3.82674 + 2.56480I$
$u = -1.000000I$ $a = -0.557947 + 0.114099I$ $b = -0.720342 - 0.351808I$	$-3.50087 - 1.41510I$	$0.17326 + 4.90874I$
$u = -1.000000I$ $a = -0.436506 - 0.194538I$ $b = -0.911292 + 0.851808I$	$3.50087 + 3.16396I$	$3.82674 - 2.56480I$
$u = -1.000000I$ $a = -1.38460 + 1.74182I$ $b = 0.720342 - 0.351808I$	$-3.50087 + 1.41510I$	$0.17326 - 4.90874I$

VI. $I^u_6 = \langle -6u^3a^2 + 11u^3a + \cdots + 21a + 26,\ 2u^3a^2 + 2u^3a + \cdots + 2a^2 + 2a,\ u^4 + u^3 + 2u^2 + 2u + 1\rangle$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} a \\ 0.139535a^2u^3 - 0.255814au^3 + \cdots - 0.488372a - 0.604651 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.209302a^2u^3 + 0.116279au^3 + \cdots + 0.767442a + 2.09302 \\ 0.0930233a^2u^3 - 0.837209au^3 + \cdots - 0.325581a - 1.06977 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.302326a^2u^3 - 0.720930au^3 + \cdots + 0.441860a + 1.02326 \\ 0.0930233a^2u^3 - 0.837209au^3 + \cdots - 0.325581a - 1.06977 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 2u^3 + u^2 + 3u + 3 \\ -u^3 - u^2 - u - 2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_5 = \begin{pmatrix} u^2 + 1 \\ u^3 + 2u + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.139535a^2u^3 + 0.255814au^3 + \cdots - 0.511628a + 0.604651 \\ -0.139535a^2u^3 + 0.255814au^3 + \cdots + 0.488372a + 0.604651 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 4u^3 + 4u + 6$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^6 - 4y^5 + 10y^4 - 11y^3 + 19y^2 - 3y + 1)^2$
c_2, c_6, c_7 c_8, c_{12}	$(y^6 - 4y^5 + 6y^4 - 3y^3 - y^2 + y + 1)^2$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$(y^4 + 3y^3 + 2y^2 + 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I^u_6	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.621744 + 0.440597I$ $a = 0.924150 - 1.015430I$ $b = -1.252310 + 0.237364I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$
$u = -0.621744 + 0.440597I$ $a = -0.63726 + 1.54652I$ $b = 0.218964 - 0.666188I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$
$u = -0.621744 + 0.440597I$ $a = -1.28689 - 2.26314I$ $b = 1.033350 + 0.428825I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$
$u = -0.621744 - 0.440597I$ $a = 0.924150 + 1.015430I$ $b = -1.252310 - 0.237364I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = -0.621744 - 0.440597I$ $a = -0.63726 - 1.54652I$ $b = 0.218964 + 0.666188I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = -0.621744 - 0.440597I$ $a = -1.28689 + 2.26314I$ $b = 1.033350 - 0.428825I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = 0.121744 + 1.306620I$ $a = -1.381780 + 0.280337I$ $b = -1.252310 - 0.237364I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = 0.121744 + 1.306620I$ $a = -0.377578 - 0.240530I$ $b = 0.218964 + 0.666188I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = 0.121744 + 1.306620I$ $a = 0.75936 + 1.69224I$ $b = 1.033350 - 0.428825I$	$-3.28987 + 2.02988I$	$4.00000 - 3.46410I$
$u = 0.121744 - 1.306620I$ $a = -1.381780 - 0.280337I$ $b = -1.252310 + 0.237364I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$

Solutions to I_6^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.121744 - 1.306620I$ $a = -0.377578 + 0.240530I$ $b = 0.218964 - 0.666188I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$
$u = 0.121744 - 1.306620I$ $a = 0.75936 - 1.69224I$ $b = 1.033350 + 0.428825I$	$-3.28987 - 2.02988I$	$4.00000 + 3.46410I$

VII. $I^u_7 = \langle b-1,\ 6a+u-3,\ u^2+3\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 3 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -\frac{1}{6}u + \frac{1}{2} \\ 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{1}{6}u + \frac{1}{2} \\ -1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{1}{6}u - \frac{1}{2} \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -u \\ -2u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -2 \\ -3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{7}{6}u + \frac{1}{2} \\ -2u + 1 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ -2u \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_7^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.73205I$		
$a =$	$0.500000 - 0.288675I$	-13.1595	0
$b =$	1.00000		
$u =$	$-1.73205I$		
$a =$	$0.500000 + 0.288675I$	-13.1595	0
$b =$	1.00000		

VIII. $I_1^v = \langle a,\ b-1,\ v-1\rangle$

(i) Arc colorings

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

$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

$a_2 = \begin{pmatrix} 1 \\ -1 \end{pmatrix}$

$a_1 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

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

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

$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$

$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 0$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_6 c_7, c_8, c_{12}	$y - 1$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	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	0	0
$b =$	1.00000		

IX. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^3(u^3+3u^2+5u+4)(u^4-u^3+3u^2-2u+1)^2$ $\cdot(u^6+3u^5+u^4-3u^3+3u^2+2u+1)$ $\cdot((u^6+4u^5+6u^4+3u^3-u^2-u+1)^2)(u^{17}+8u^{16}+\cdots+3u+1)^2$ $\cdot(u^{25}+10u^{24}+\cdots+1455u+169)$
c_2	$(u-1)^3(u^3-u^2-u+2)(u^6-2u^4-u^3+u^2+u+1)^2$ $\cdot(u^6+u^5-u^4+u^3+u^2-2u+1)(u^8-u^6+3u^4-2u^2+1)$ $\cdot((u^{17}+2u^{16}+\cdots-u-1)^2)(u^{25}-6u^{24}+\cdots+57u-13)$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$u(u^2+1)^4(u^2+3)(u^3+2u-1)^3(u^4+u^3+2u^2+2u+1)^3$ $\cdot(u^{25}+15u^{23}+\cdots-2u-2)(u^{34}-2u^{33}+\cdots-36u+8)$
c_6	$(u+1)^3(u^3-u^2-u+2)(u^6-2u^4-u^3+u^2+u+1)^2$ $\cdot(u^6+u^5-u^4+u^3+u^2-2u+1)(u^8-u^6+3u^4-2u^2+1)$ $\cdot((u^{17}+2u^{16}+\cdots-u-1)^2)(u^{25}-6u^{24}+\cdots+57u-13)$
c_7, c_8	$(u+1)^3(u^3-u^2-u+2)(u^6-2u^4-u^3+u^2+u+1)^2$ $\cdot(u^6+u^5-u^4+u^3+u^2-2u+1)(u^8-5u^6+7u^4-2u^2+1)$ $\cdot((u^{17}-2u^{16}+\cdots+3u-1)^2)(u^{25}+6u^{24}+\cdots-3u-13)$
c_{12}	$(u-1)^3(u^3-u^2-u+2)(u^6-2u^4-u^3+u^2+u+1)^2$ $\cdot(u^6+u^5-u^4+u^3+u^2-2u+1)(u^8-5u^6+7u^4-2u^2+1)$ $\cdot((u^{17}-2u^{16}+\cdots+3u-1)^2)(u^{25}+6u^{24}+\cdots-3u-13)$

X. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^3(y^3+y^2+y-16)(y^4+5y^3+7y^2+2y+1)^2$ $\cdot(y^6-7y^5+25y^4-13y^3+23y^2+2y+1)$ $\cdot(y^6-4y^5+10y^4-11y^3+19y^2-3y+1)^2$ $\cdot((y^{17}+4y^{16}+\cdots-13y-1)^2)(y^{25}+14y^{24}+\cdots+367199y-28561)$
c_2, c_6	$(y-1)^3(y^3-3y^2+5y-4)(y^4-y^3+3y^2-2y+1)^2$ $\cdot(y^6-4y^5+6y^4-3y^3-y^2+y+1)^2$ $\cdot(y^6-3y^5+y^4+3y^3+3y^2-2y+1)(y^{17}-8y^{16}+\cdots+3y-1)^2$ $\cdot(y^{25}-10y^{24}+\cdots+1455y-169)$
c_3, c_4, c_5 c_9, c_{10}, c_{11}	$y(y+1)^8(y+3)^2(y^3+4y^2+4y-1)^3(y^4+3y^3+2y^2+1)^3$ $\cdot(y^{25}+30y^{24}+\cdots-24y-4)(y^{34}+28y^{33}+\cdots+2192y+64)$
c_7, c_8, c_{12}	$(y-1)^3(y^3-3y^2+5y-4)(y^4-5y^3+7y^2-2y+1)^2$ $\cdot(y^6-4y^5+6y^4-3y^3-y^2+y+1)^2$ $\cdot(y^6-3y^5+y^4+3y^3+3y^2-2y+1)(y^{17}-16y^{16}+\cdots+19y-1)^2$ $\cdot(y^{25}-26y^{24}+\cdots+191y-169)$