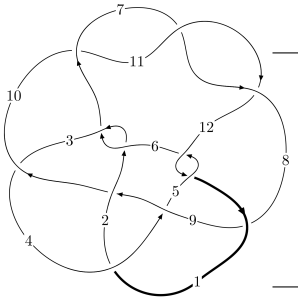
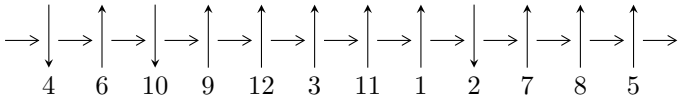
$12a_{0958}$ $(K12a_{0958})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle 3.24811 \times 10^{815} u^{126} - 2.46551 \times 10^{815} u^{125} + \cdots + 9.83532 \times 10^{817} b + 9.09376 \times 10^{818}, \\
&\quad - 1.75194 \times 10^{818} u^{126} - 5.25120 \times 10^{815} u^{125} + \cdots + 1.51562 \times 10^{821} a - 1.08916 \times 10^{822}, \\
&\quad u^{127} - u^{126} + \cdots + 17533u + 1541 \rangle \\
I_2^u &= \langle -1.10098 \times 10^{15} u^{22} + 8.50756 \times 10^{14} u^{21} + \cdots + 6.63632 \times 10^{15} b + 1.53110 \times 10^{16}, \\
&\quad 4522732367957282 u^{22} - 975327261831870 u^{21} + \cdots + 6636320717064427 a + 5366933139683854, \\
&\quad u^{23} + 8u^{21} + \cdots - 2u + 1 \rangle \\
I_3^u &= \langle u^2 + b + 3u + 1,\ -u^2 + a - 4u - 4,\ u^3 + 3u^2 + 2u + 1 \rangle \\
I_4^u &= \langle b - u,\ -u^2 + a + u - 2,\ u^3 - u^2 + 2u - 1 \rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 156 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. $\boldsymbol{I_1^u = \langle 3.25 \times 10^{815} u^{126} - 2.47 \times 10^{815} u^{125} + \cdots + 9.84 \times 10^{817} b + 9.09 \times 10^{818},\ -1.75 \times 10^{818} u^{126} - 5.25 \times 10^{815} u^{125} + \cdots + 1.52 \times 10^{821} a - 1.09 \times 10^{822},\ u^{127} - u^{126} + \cdots + 17533u + 1541 \rangle}$

(i) Arc colorings

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

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

$$a_1 = \begin{pmatrix} 0.00115592u^{126} + 3.46471 \times 10^{-6} u^{125} + \cdots + 50.3754u + 7.18625 \\ -0.00330250u^{126} + 0.00250680u^{125} + \cdots - 119.213u - 9.24602 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} 0.00477679u^{126} - 0.00358681u^{125} + \cdots + 147.480u + 14.6457 \\ -0.00393245u^{126} + 0.00319957u^{125} + \cdots - 125.329u - 9.29317 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00686858u^{126} + 0.0127713u^{125} + \cdots + 464.976u + 54.0429 \\ 0.000983727u^{126} - 0.00205194u^{125} + \cdots - 136.835u - 14.3804 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0156371u^{126} - 0.0127997u^{125} + \cdots + 573.026u + 44.8327 \\ -0.00738456u^{126} + 0.00721566u^{125} + \cdots - 281.515u - 20.3776 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00750345u^{126} + 0.0130698u^{125} + \cdots + 405.454u + 47.2377 \\ 0.00108359u^{126} - 0.00196659u^{125} + \cdots - 99.6256u - 10.0985 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.00445842u^{126} - 0.00250333u^{125} + \cdots + 169.589u + 16.4323 \\ -0.00330250u^{126} + 0.00250680u^{125} + \cdots - 119.213u - 9.24602 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0100270u^{126} - 0.00862773u^{125} + \cdots + 375.684u + 28.8926 \\ -0.00347385u^{126} + 0.00315813u^{125} + \cdots - 186.725u - 13.6212 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.00496870u^{126} + 0.000885001u^{125} + \cdots - 378.517u - 36.7701 \\ 0.000661809u^{126} + 0.000354500u^{125} + \cdots + 63.5886u + 6.17548 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.00506831u^{126} + 0.00355203u^{125} + \cdots - 219.198u - 13.1992 \\ 0.00335759u^{126} - 0.00443429u^{125} + \cdots + 58.2261u + 3.86702 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -0.0123516u^{126} - 0.00278997u^{125} + \cdots - 1942.80u - 202.679$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{127} - 5u^{126} + \cdots - 1344u + 64$
c_2, c_6	$u^{127} + 2u^{126} + \cdots + 10323u + 2467$
c_3	$u^{127} - 3u^{126} + \cdots + 1233985982u - 292939631$
c_4	$u^{127} + u^{126} + \cdots + 17533u - 1541$
c_5, c_{12}	$u^{127} + 3u^{126} + \cdots - 39833u + 3461$
c_7, c_{10}, c_{11}	$u^{127} - 5u^{126} + \cdots - 361u + 29$
c_8	$u^{127} + u^{126} + \cdots - 26u - 1$
c_9	$u^{127} - u^{126} + \cdots + 3405u + 207$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{127}+5y^{126}+\cdots+215040y-4096$
c_2, c_6	$y^{127}-82y^{126}+\cdots+357241133y-6086089$
c_3	$y^{127}+37y^{126}+\cdots-3665675937186530842y-85813627410416161$
c_4	$y^{127}+35y^{126}+\cdots+35832577y-2374681$
c_5, c_{12}	$y^{127}+61y^{126}+\cdots+1408883241y-11978521$
c_7, c_{10}, c_{11}	$y^{127}-141y^{126}+\cdots+115183y-841$
c_8	$y^{127}+y^{126}+\cdots+116y-1$
c_9	$y^{127}-13y^{126}+\cdots+5912703y-42849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.454897+0.911052I$ $a=\ 1.236380+0.261261I$ $b=-0.089606-0.913498I$	$0.559126+0.625580I$	0
$u=-0.454897-0.911052I$ $a=\ 1.236380-0.261261I$ $b=-0.089606+0.913498I$	$0.559126-0.625580I$	0
$u=\ 0.364851+0.905528I$ $a=\ 0.903144-0.657744I$ $b=\ 0.203950+1.280870I$	$-3.19098+2.67904I$	0
$u=\ 0.364851-0.905528I$ $a=\ 0.903144+0.657744I$ $b=\ 0.203950-1.280870I$	$-3.19098-2.67904I$	0
$u=-0.964069$ $a=\ 0.535737$ $b=\ 0.630821$	1.16343	0
$u=\ 0.353449+0.888121I$ $a=\ 0.940412-0.922540I$ $b=\ 0.178902+1.286600I$	$-3.18398+2.66953I$	0
$u=\ 0.353449-0.888121I$ $a=\ 0.940412+0.922540I$ $b=\ 0.178902-1.286600I$	$-3.18398-2.66953I$	0
$u=\ 1.055390+0.142832I$ $a=\ 0.348792-0.167075I$ $b=\ 0.240369-0.821665I$	$-0.35427-2.07951I$	0
$u=\ 1.055390-0.142832I$ $a=\ 0.348792+0.167075I$ $b=\ 0.240369+0.821665I$	$-0.35427+2.07951I$	0
$u=-0.304445+0.880878I$ $a=\ 1.202040+0.207316I$ $b=\ 0.52487-1.33794I$	$-2.09198-6.77319I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.304445-0.880878I$ $a=1.202040-0.207316I$ $b=0.52487+1.33794I$	$-2.09198+6.77319I$	0
$u=0.632797+0.650968I$ $a=0.724983+0.404447I$ $b=1.15491+0.96814I$	$7.33318-2.03058I$	0
$u=0.632797-0.650968I$ $a=0.724983-0.404447I$ $b=1.15491-0.96814I$	$7.33318+2.03058I$	0
$u=0.612874+0.663367I$ $a=-0.587697-0.297157I$ $b=-0.488503+0.291381I$	$-1.15905+1.71609I$	0
$u=0.612874-0.663367I$ $a=-0.587697+0.297157I$ $b=-0.488503-0.291381I$	$-1.15905-1.71609I$	0
$u=-0.537008+0.717718I$ $a=1.36776+0.49896I$ $b=0.934426+0.402625I$	$11.89500+0.48258I$	0
$u=-0.537008-0.717718I$ $a=1.36776-0.49896I$ $b=0.934426-0.402625I$	$11.89500-0.48258I$	0
$u=-0.669529+0.880014I$ $a=-0.849664-0.146800I$ $b=-0.758023-0.071047I$	$0.20746-4.43767I$	0
$u=-0.669529-0.880014I$ $a=-0.849664+0.146800I$ $b=-0.758023+0.071047I$	$0.20746+4.43767I$	0
$u=0.745732+0.817700I$ $a=1.33611+0.83979I$ $b=-0.181688+0.806349I$	$7.25608+6.95311I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.745732 - 0.817700I$ $a = 1.33611 - 0.83979I$ $b = -0.181688 - 0.806349I$	$7.25608 - 6.95311I$	0
$u = 0.246295 + 0.856716I$ $a = 1.44391 - 0.09789I$ $b = 0.78232 + 1.30470I$	$5.44496 + 9.85386I$	0
$u = 0.246295 - 0.856716I$ $a = 1.44391 + 0.09789I$ $b = 0.78232 - 1.30470I$	$5.44496 - 9.85386I$	0
$u = -0.034823 + 0.889992I$ $a = -0.921638 - 0.430012I$ $b = -0.136518 + 1.160520I$	$-3.73206 + 1.61429I$	0
$u = -0.034823 - 0.889992I$ $a = -0.921638 + 0.430012I$ $b = -0.136518 - 1.160520I$	$-3.73206 - 1.61429I$	0
$u = -0.724488 + 0.510499I$ $a = -0.042859 - 0.169584I$ $b = -0.84523 - 1.18019I$	$3.13816 + 0.66185I$	0
$u = -0.724488 - 0.510499I$ $a = -0.042859 + 0.169584I$ $b = -0.84523 + 1.18019I$	$3.13816 - 0.66185I$	0
$u = -0.309997 + 0.826021I$ $a = 1.38789 + 1.88410I$ $b = 0.19953 - 1.47411I$	$1.64868 - 4.08208I$	0
$u = -0.309997 - 0.826021I$ $a = 1.38789 - 1.88410I$ $b = 0.19953 + 1.47411I$	$1.64868 + 4.08208I$	0
$u = -0.242034 + 0.841163I$ $a = -0.59511 + 1.58495I$ $b = 0.313244 - 0.932375I$	$3.30458 - 2.00993I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.242034-0.841163I$ $a=-0.59511-1.58495I$ $b=\ \ 0.313244+0.932375I$	$3.30458+2.00993I$	0
$u=\ \ 0.926532+0.637758I$ $a=-1.58255-0.25843I$ $b=-0.483025-1.252390I$	$9.65313+9.05864I$	0
$u=\ \ 0.926532-0.637758I$ $a=-1.58255+0.25843I$ $b=-0.483025+1.252390I$	$9.65313-9.05864I$	0
$u=-0.765524+0.403805I$ $a=-1.56302-0.22468I$ $b=-0.872536-0.167249I$	$13.05490-4.10370I$	0
$u=-0.765524-0.403805I$ $a=-1.56302+0.22468I$ $b=-0.872536+0.167249I$	$13.05490+4.10370I$	0
$u=\ \ 0.842786+0.760771I$ $a=\ \ 0.872088-0.638158I$ $b=\ \ 0.914725+0.316028I$	$7.85544+0.11358I$	0
$u=\ \ 0.842786-0.760771I$ $a=\ \ 0.872088+0.638158I$ $b=\ \ 0.914725-0.316028I$	$7.85544-0.11358I$	0
$u=\ \ 0.841248+0.047036I$ $a=-1.084480-0.673211I$ $b=-0.588181+0.238816I$	$4.87440+0.69256I$	0
$u=\ \ 0.841248-0.047036I$ $a=-1.084480+0.673211I$ $b=-0.588181-0.238816I$	$4.87440-0.69256I$	0
$u=-0.944043+0.688858I$ $a=\ \ 0.529722-0.529388I$ $b=\ \ 0.1209810-0.0073066I$	$2.75448-4.67938I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.944043-0.688858I$ $a=\ \ 0.529722+0.529388I$ $b=\ \ 0.1209810+0.0073066I$	$2.75448+4.67938I$	0
$u=-0.654357+0.484227I$ $a=\ \ 0.821743+0.225535I$ $b=\ \ 0.391190-0.102487I$	$1.076060-0.369429I$	0
$u=-0.654357-0.484227I$ $a=\ \ 0.821743-0.225535I$ $b=\ \ 0.391190+0.102487I$	$1.076060+0.369429I$	0
$u=\ \ 0.762044+0.916108I$ $a=-0.004572+0.615664I$ $b=-0.360453+1.027130I$	$9.20578+0.95990I$	0
$u=\ \ 0.762044-0.916108I$ $a=-0.004572-0.615664I$ $b=-0.360453-1.027130I$	$9.20578-0.95990I$	0
$u=-1.100180+0.460924I$ $a=\ \ 0.349419+0.461107I$ $b=\ \ 0.546703+1.099350I$	$5.42405+5.10393I$	0
$u=-1.100180-0.460924I$ $a=\ \ 0.349419-0.461107I$ $b=\ \ 0.546703-1.099350I$	$5.42405-5.10393I$	0
$u=-0.828021+0.862047I$ $a=\ \ 1.278050-0.252875I$ $b=\ \ 0.462587-0.860582I$	$3.00752-5.37604I$	0
$u=-0.828021-0.862047I$ $a=\ \ 1.278050+0.252875I$ $b=\ \ 0.462587+0.860582I$	$3.00752+5.37604I$	0
$u=\ \ 0.803669+0.893064I$ $a=\ \ 1.59245+0.06065I$ $b=\ \ 0.560675+1.197540I$	$9.28090+4.98514I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.803669 - 0.893064I$ $a = 1.59245 - 0.06065I$ $b = 0.560675 - 1.197540I$	$9.28090 - 4.98514I$	0
$u = 0.755494 + 0.938460I$ $a = -0.881408 + 0.391019I$ $b = -1.145520 + 0.049576I$	$7.29999 + 5.77567I$	0
$u = 0.755494 - 0.938460I$ $a = -0.881408 - 0.391019I$ $b = -1.145520 - 0.049576I$	$7.29999 - 5.77567I$	0
$u = 0.182060 + 0.773412I$ $a = -1.59807 - 0.01138I$ $b = -0.387588 - 1.135120I$	$-4.73202 + 1.17378I$	0
$u = 0.182060 - 0.773412I$ $a = -1.59807 + 0.01138I$ $b = -0.387588 + 1.135120I$	$-4.73202 - 1.17378I$	0
$u = -0.314902 + 0.722477I$ $a = -2.90582 + 0.44698I$ $b = 0.154572 + 0.948395I$	$1.41058 + 0.66806I$	0
$u = -0.314902 - 0.722477I$ $a = -2.90582 - 0.44698I$ $b = 0.154572 - 0.948395I$	$1.41058 - 0.66806I$	0
$u = -0.231689 + 0.741214I$ $a = -1.73699 + 0.50596I$ $b = -0.721990 + 1.036050I$	$1.32567 - 2.90614I$	0
$u = -0.231689 - 0.741214I$ $a = -1.73699 - 0.50596I$ $b = -0.721990 - 1.036050I$	$1.32567 + 2.90614I$	0
$u = -0.896987 + 0.860662I$ $a = 0.843915 + 0.201618I$ $b = 1.401600 + 0.112990I$	$11.6518 - 11.7658I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.896987-0.860662I$ $a=\ 0.843915-0.201618I$ $b=\ 1.401600-0.112990I$	$11.6518+11.7658I$	0
$u=\ 0.916351+0.859472I$ $a=\ 0.829089-0.033001I$ $b=\ 1.049720+0.101056I$	$4.38768+8.69266I$	0
$u=\ 0.916351-0.859472I$ $a=\ 0.829089+0.033001I$ $b=\ 1.049720-0.101056I$	$4.38768-8.69266I$	0
$u=\ 0.257071+0.670014I$ $a=-2.73889+0.10092I$ $b=-0.111502-1.044230I$	$-4.25279+0.60258I$	$0.+7.99103I$
$u=\ 0.257071-0.670014I$ $a=-2.73889-0.10092I$ $b=-0.111502+1.044230I$	$-4.25279-0.60258I$	$0.-7.99103I$
$u=-0.079891+1.294470I$ $a=\ 0.112299-1.369410I$ $b=-0.131679+0.805279I$	$10.47890-3.07948I$	0
$u=-0.079891-1.294470I$ $a=\ 0.112299+1.369410I$ $b=-0.131679-0.805279I$	$10.47890+3.07948I$	0
$u=\ 0.490618+0.493448I$ $a=\ 1.136370-0.072984I$ $b=\ 0.972754-0.617116I$	$3.68376+0.15468I$	$13.04643-5.18596I$
$u=\ 0.490618-0.493448I$ $a=\ 1.136370+0.072984I$ $b=\ 0.972754+0.617116I$	$3.68376-0.15468I$	$13.04643+5.18596I$
$u=-0.442393+0.530026I$ $a=\ 0.662775-0.185174I$ $b=\ 1.096030-0.379727I$	$1.67691+0.65702I$	$1.51745+4.11768I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.442393-0.530026I$ $a=\ \ 0.662775+0.185174I$ $b=\ \ 1.096030+0.379727I$	$1.67691-0.65702I$	$1.51745-4.11768I$
$u=-0.777622+1.149890I$ $a=\ \ 0.038656-0.268231I$ $b=-0.195483-0.459087I$	$2.45396-0.71763I$	0
$u=-0.777622-1.149890I$ $a=\ \ 0.038656+0.268231I$ $b=-0.195483+0.459087I$	$2.45396+0.71763I$	0
$u=-0.005560+0.609730I$ $a=\ \ 3.28949-1.62600I$ $b=-0.224196+1.006980I$	$6.49113-8.79984I$	$4.45971+5.72952I$
$u=-0.005560-0.609730I$ $a=\ \ 3.28949+1.62600I$ $b=-0.224196-1.006980I$	$6.49113+8.79984I$	$4.45971-5.72952I$
$u=-1.254060+0.624367I$ $a=-0.818721+0.391812I$ $b=-0.357603+1.079120I$	$2.47405-4.31871I$	0
$u=-1.254060-0.624367I$ $a=-0.818721-0.391812I$ $b=-0.357603-1.079120I$	$2.47405+4.31871I$	0
$u=-0.875330+1.096280I$ $a=\ \ 0.994591+0.148767I$ $b=\ \ 0.69277-1.35605I$	$1.06463-7.82295I$	0
$u=-0.875330-1.096280I$ $a=\ \ 0.994591-0.148767I$ $b=\ \ 0.69277+1.35605I$	$1.06463+7.82295I$	0
$u=\ \ 0.731462+1.206850I$ $a=\ \ 0.894000-0.269771I$ $b=\ \ 0.393242+1.272140I$	$-3.24017+3.59589I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.731462 - 1.206850I$ $a = 0.894000 + 0.269771I$ $b = 0.393242 - 1.272140I$	$-3.24017 - 3.59589I$	0
$u = -0.88236 + 1.11457I$ $a = -0.492130 - 0.691183I$ $b = -0.834998 + 0.681281I$	$11.01530 + 5.14924I$	0
$u = -0.88236 - 1.11457I$ $a = -0.492130 + 0.691183I$ $b = -0.834998 - 0.681281I$	$11.01530 - 5.14924I$	0
$u = 0.571916$ $a = 0.777170$ $b = 2.15862$	4.54867	34.0560
$u = -0.80299 + 1.19060I$ $a = -1.253900 - 0.293786I$ $b = -0.59518 + 1.34906I$	$3.28531 - 11.90180I$	0
$u = -0.80299 - 1.19060I$ $a = -1.253900 + 0.293786I$ $b = -0.59518 - 1.34906I$	$3.28531 + 11.90180I$	0
$u = 0.028522 + 0.532814I$ $a = 2.59823 + 2.19202I$ $b = -0.092222 - 1.166290I$	$-0.49895 + 5.51266I$	$3.87288 - 8.41207I$
$u = 0.028522 - 0.532814I$ $a = 2.59823 - 2.19202I$ $b = -0.092222 + 1.166290I$	$-0.49895 - 5.51266I$	$3.87288 + 8.41207I$
$u = -0.41618 + 1.42484I$ $a = 0.639655 + 0.556368I$ $b = 0.114977 - 1.126460I$	$-0.100427 + 1.151540I$	0
$u = -0.41618 - 1.42484I$ $a = 0.639655 - 0.556368I$ $b = 0.114977 + 1.126460I$	$-0.100427 - 1.151540I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.191192+0.478084I$ $a=-3.57333-1.96870I$ $b=-0.227655+1.258130I$	$-1.59523-2.47874I$	$-1.76895-3.57372I$
$u=-0.191192-0.478084I$ $a=-3.57333+1.96870I$ $b=-0.227655-1.258130I$	$-1.59523+2.47874I$	$-1.76895+3.57372I$
$u=\ \ 0.81001+1.25615I$ $a=-1.066650+0.241770I$ $b=-0.454020-1.234480I$	$-3.31619+8.92992I$	0
$u=\ \ 0.81001-1.25615I$ $a=-1.066650-0.241770I$ $b=-0.454020+1.234480I$	$-3.31619-8.92992I$	0
$u=\ \ 0.503512$ $a=-0.379845$ $b=-2.53263$	-0.427603	295.740
$u=\ \ 0.92862+1.22137I$ $a=-0.897664+0.088382I$ $b=-0.85389-1.31163I$	$2.67981+9.23774I$	0
$u=\ \ 0.92862-1.22137I$ $a=-0.897664-0.088382I$ $b=-0.85389+1.31163I$	$2.67981-9.23774I$	0
$u=-0.075258+0.440919I$ $a=\ \ 0.74661-1.95932I$ $b=\ \ 0.00873+1.53511I$	$-0.63644-1.38914I$	$9.64634-3.81907I$
$u=-0.075258-0.440919I$ $a=\ \ 0.74661+1.95932I$ $b=\ \ 0.00873-1.53511I$	$-0.63644+1.38914I$	$9.64634+3.81907I$
$u=\ \ 0.92662+1.28415I$ $a=\ \ 1.066380-0.217317I$ $b=\ \ 0.67602+1.38577I$	$7.6671+18.8250I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.92662 - 1.28415I$ $a = 1.066380 + 0.217317I$ $b = 0.67602 - 1.38577I$	$7.6671 - 18.8250I$	0
$u = -0.86365 + 1.35509I$ $a = -0.754931 - 0.232086I$ $b = -0.617177 + 1.210530I$	$-2.87015 - 7.04041I$	0
$u = -0.86365 - 1.35509I$ $a = -0.754931 + 0.232086I$ $b = -0.617177 - 1.210530I$	$-2.87015 + 7.04041I$	0
$u = 1.52812 + 0.52446I$ $a = -0.270913 + 0.286614I$ $b = -0.619035 + 0.982255I$	$10.0022 - 10.5786I$	0
$u = 1.52812 - 0.52446I$ $a = -0.270913 - 0.286614I$ $b = -0.619035 - 0.982255I$	$10.0022 + 10.5786I$	0
$u = -0.80364 + 1.40467I$ $a = -0.806237 - 0.231371I$ $b = -0.271442 + 1.012980I$	$-2.69179 - 4.73591I$	0
$u = -0.80364 - 1.40467I$ $a = -0.806237 + 0.231371I$ $b = -0.271442 - 1.012980I$	$-2.69179 + 4.73591I$	0
$u = -0.96341 + 1.34469I$ $a = 0.926686 + 0.185690I$ $b = 0.50814 - 1.32598I$	$0.05392 - 14.09260I$	0
$u = -0.96341 - 1.34469I$ $a = 0.926686 - 0.185690I$ $b = 0.50814 + 1.32598I$	$0.05392 + 14.09260I$	0
$u = 1.14186 + 1.21675I$ $a = -0.395734 + 0.245869I$ $b = -0.507639 - 0.638127I$	$3.56550 - 1.64946I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.14186 - 1.21675I$ $a = -0.395734 - 0.245869I$ $b = -0.507639 + 0.638127I$	$3.56550 + 1.64946I$	0
$u = -1.68050 + 0.09855I$ $a = -0.209624 - 0.004894I$ $b = -0.349311 - 0.800477I$	$3.19565 + 5.32403I$	0
$u = -1.68050 - 0.09855I$ $a = -0.209624 + 0.004894I$ $b = -0.349311 + 0.800477I$	$3.19565 - 5.32403I$	0
$u = -0.178580 + 0.249835I$ $a = -0.525221 + 0.323864I$ $b = -2.71322 - 2.46711I$	$5.05784 - 0.07192I$	$-103.3235 + 14.3667I$
$u = -0.178580 - 0.249835I$ $a = -0.525221 - 0.323864I$ $b = -2.71322 + 2.46711I$	$5.05784 + 0.07192I$	$-103.3235 - 14.3667I$
$u = 0.60892 + 1.58505I$ $a = -0.461748 + 0.510598I$ $b = -0.401564 - 1.122160I$	$-0.26187 + 3.75347I$	0
$u = 0.60892 - 1.58505I$ $a = -0.461748 - 0.510598I$ $b = -0.401564 + 1.122160I$	$-0.26187 - 3.75347I$	0
$u = 1.41449 + 1.10586I$ $a = -0.218705 - 0.278228I$ $b = 0.265127 - 0.651380I$	$4.21071 - 0.79915I$	0
$u = 1.41449 - 1.10586I$ $a = -0.218705 + 0.278228I$ $b = 0.265127 + 0.651380I$	$4.21071 + 0.79915I$	0
$u = 1.05729 + 1.52040I$ $a = 0.674220 - 0.174204I$ $b = 0.310882 + 1.178710I$	$-0.61055 + 7.14284I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.05729 - 1.52040I$ $a = 0.674220 + 0.174204I$ $b = 0.310882 - 1.178710I$	$-0.61055 - 7.14284I$	0
$u = -0.124839$ $a = 7.53198$ $b = -0.425097$	2.14727	2.32940
$u = 1.04219 + 1.57392I$ $a = 0.0430996 - 0.0774997I$ $b = 0.248857 - 0.984769I$	$7.34215 - 2.08826I$	0
$u = 1.04219 - 1.57392I$ $a = 0.0430996 + 0.0774997I$ $b = 0.248857 + 0.984769I$	$7.34215 + 2.08826I$	0
$u = -1.97852$ $a = -0.0986425$ $b = -0.669676$	2.69964	0
$u = -0.20582 + 2.15705I$ $a = 0.061621 + 0.482660I$ $b = 0.112870 - 0.857557I$	$8.10694 + 0.46379I$	0
$u = -0.20582 - 2.15705I$ $a = 0.061621 - 0.482660I$ $b = 0.112870 + 0.857557I$	$8.10694 - 0.46379I$	0

II.

$\boldsymbol{I_2^u = \langle -1.10\times10^{15}u^{22}+8.51\times10^{14}u^{21}+\cdots+6.64\times10^{15}b+1.53\times10^{16},\ 4.52\times10^{15}u^{22}-9.75\times10^{14}u^{21}+\cdots+6.64\times10^{15}a+5.37\times10^{15},\ u^{23}+8u^{21}+\cdots-2u+1\rangle}$

(i) Arc colorings

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

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

$$a_1 = \begin{pmatrix}-0.681512u^{22}+0.146968u^{21}+\cdots-0.923185u-0.808721\\0.165903u^{22}-0.128197u^{21}+\cdots+1.55953u-2.30715\end{pmatrix}$$

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

$$a_2 = \begin{pmatrix}-0.804788u^{22}-0.0410468u^{21}+\cdots-1.50727u+1.35146\\0.0494357u^{22}+0.0233899u^{21}+\cdots+1.30678u-2.11913\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}1.30715u^{22}+0.165903u^{21}+\cdots-0.569959u-1.05476\\-0.681155u^{22}+0.0324941u^{21}+\cdots-1.37312u+1.91008\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-1.85955u^{22}-1.34819u^{21}+\cdots+4.24826u+5.03093\\2.04944u^{22}+1.02339u^{21}+\cdots-0.693220u-4.11913\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.265492u^{22}+0.404260u^{21}+\cdots-7.22799u+2.45480\\-1.08715u^{22}+0.196252u^{21}+\cdots-3.71722u+1.02931\end{pmatrix}$$

$$a_{12} = \begin{pmatrix}-0.847415u^{22}+0.275165u^{21}+\cdots-2.48272u+1.49842\\0.165903u^{22}-0.128197u^{21}+\cdots+1.55953u-2.30715\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-2.19625u^{22}-1.30761u^{21}+\cdots+3.14499u+1.91285\\1.16694u^{22}+0.220462u^{21}+\cdots+1.92181u-3.57145\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-2.09717u^{22}-1.20499u^{21}+\cdots+8.43857u-3.57318\\0.995638u^{22}-0.785046u^{21}+\cdots+6.19443u-2.35145\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.784171u^{22}-0.751390u^{21}+\cdots+4.05901u-6.37143\\-0.671861u^{22}-1.02224u^{21}+\cdots+5.00174u+0.688546\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$$= -\frac{4521490905524216}{6636320717064427}u^{22}+\frac{25741386698741685}{6636320717064427}u^{21}+\cdots+\frac{192580355506969528}{6636320717064427}u-\frac{90890914710757047}{6636320717064427}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{23} - 12u^{22} + \cdots + 303u - 121$
c_2	$u^{23} - 3u^{22} + \cdots - 4u + 1$
c_3	$u^{23} - 2u^{22} + \cdots + u + 1$
c_4	$u^{23} + 8u^{21} + \cdots - 2u + 1$
c_5	$u^{23} + 8u^{22} + \cdots - 8u + 1$
c_6	$u^{23} + 3u^{22} + \cdots - 4u - 1$
c_7	$u^{23} - 4u^{22} + \cdots - 6u + 1$
c_8	$u^{23} + u^{22} + \cdots - 25u - 1$
c_9	$u^{23} - u^{22} + \cdots - 10u^2 - 1$
c_{10}, c_{11}	$u^{23} + 4u^{22} + \cdots - 6u - 1$
c_{12}	$u^{23} - 8u^{22} + \cdots - 8u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{23} - 16y^{22} + \cdots + 48249y - 14641$
c_2, c_6	$y^{23} - 9y^{22} + \cdots + 14y - 1$
c_3	$y^{23} - 18y^{22} + \cdots - 57y - 1$
c_4	$y^{23} + 16y^{22} + \cdots - 2y - 1$
c_5, c_{12}	$y^{23} - 2y^{22} + \cdots + 6y - 1$
c_7, c_{10}, c_{11}	$y^{23} - 32y^{22} + \cdots + 70y - 1$
c_8	$y^{23} + 13y^{22} + \cdots + 341y - 1$
c_9	$y^{23} - y^{22} + \cdots - 20y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.054122 + 1.044060I$ $a = -0.036881 + 1.362740I$ $b = 0.254224 - 0.190898I$	$11.33820 + 2.54740I$	$14.7841 - 0.2611I$
$u = 0.054122 - 1.044060I$ $a = -0.036881 - 1.362740I$ $b = 0.254224 + 0.190898I$	$11.33820 - 2.54740I$	$14.7841 + 0.2611I$
$u = -0.335170 + 0.865489I$ $a = -1.77059 - 0.12287I$ $b = 0.122291 + 0.940541I$	$-0.380445 + 0.582794I$	$0.786758 + 0.621706I$
$u = -0.335170 - 0.865489I$ $a = -1.77059 + 0.12287I$ $b = 0.122291 - 0.940541I$	$-0.380445 - 0.582794I$	$0.786758 - 0.621706I$
$u = -0.031807 + 1.084520I$ $a = 0.037457 - 0.471825I$ $b = 0.373542 + 0.101366I$	$2.82723 - 1.06466I$	$14.8461 + 0.1978I$
$u = -0.031807 - 1.084520I$ $a = 0.037457 + 0.471825I$ $b = 0.373542 - 0.101366I$	$2.82723 + 1.06466I$	$14.8461 - 0.1978I$
$u = 0.722829 + 0.427606I$ $a = 1.31265 + 1.51472I$ $b = 0.500959 + 1.003540I$	$7.67963 + 9.32725I$	$10.28698 - 8.16172I$
$u = 0.722829 - 0.427606I$ $a = 1.31265 - 1.51472I$ $b = 0.500959 - 1.003540I$	$7.67963 - 9.32725I$	$10.28698 + 8.16172I$
$u = 0.238134 + 0.661627I$ $a = -2.45251 - 0.04553I$ $b = -0.227445 - 1.055220I$	$-4.11841 + 0.99614I$	$8.73936 - 8.33227I$
$u = 0.238134 - 0.661627I$ $a = -2.45251 + 0.04553I$ $b = -0.227445 + 1.055220I$	$-4.11841 - 0.99614I$	$8.73936 + 8.33227I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.688172$ $a = -0.667608$ $b = -2.32315$	3.74789	20.9920
$u = -1.149550 + 0.704445I$ $a = \ \ 0.750286 - 0.595212I$ $b = \ \ 0.263925 - 0.957953I$	$1.69234 - 5.69028I$	$5.73340 + 8.24756I$
$u = -1.149550 - 0.704445I$ $a = \ \ 0.750286 + 0.595212I$ $b = \ \ 0.263925 + 0.957953I$	$1.69234 + 5.69028I$	$5.73340 - 8.24756I$
$u = -0.142863 + 0.543643I$ $a = -2.98650 - 0.05802I$ $b = -0.520824 + 1.180280I$	$1.62668 - 2.15833I$	$7.79328 + 0.00342I$
$u = -0.142863 - 0.543643I$ $a = -2.98650 + 0.05802I$ $b = -0.520824 - 1.180280I$	$1.62668 + 2.15833I$	$7.79328 - 0.00342I$
$u = -0.534873$ $a = -0.327158$ $b = -2.34103$	-0.443802	-201.950
$u = -0.91067 + 1.19883I$ $a = -0.931195 - 0.159406I$ $b = -0.75546 + 1.33352I$	$0.57019 - 8.60034I$	$5.29980 + 8.62878I$
$u = -0.91067 - 1.19883I$ $a = -0.931195 + 0.159406I$ $b = -0.75546 - 1.33352I$	$0.57019 + 8.60034I$	$5.29980 - 8.62878I$
$u = \ \ 0.430844$ $a = \ \ 0.134797$ $b = -2.44864$	5.09316	-12.7030
$u = \ \ 0.85112 + 1.44858I$ $a = -0.708139 + 0.276602I$ $b = -0.425265 - 1.101120I$	$-2.31590 + 5.71532I$	$7.32651 - 6.47921I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.85112 - 1.44858I$ $a = -0.708139 - 0.276602I$ $b = -0.425265 + 1.101120I$	$-2.31590 - 5.71532I$	$7.32651 + 6.47921I$
$u = \quad 0.41178 + 2.06640I$ $a = \quad 0.215418 - 0.455394I$ $b = -0.029533 + 0.835700I$	$8.13560 - 1.01675I$	$13.2325 + 7.2503I$
$u = \quad 0.41178 - 2.06640I$ $a = \quad 0.215418 + 0.455394I$ $b = -0.029533 - 0.835700I$	$8.13560 + 1.01675I$	$13.2325 - 7.2503I$

III. $I_3^u = \langle u^2 + b + 3u + 1,\ -u^2 + a - 4u - 4,\ u^3 + 3u^2 + 2u + 1 \rangle$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 4u + 4 \\ -u^2 - 3u - 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^2 + 4u + 4 \\ -u^2 - 3u - 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 3u + 7 \\ -2u^2 - 5u - 3 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -3u^2 - 7u + 1 \\ -u - 2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 3u + 7 \\ -2u^2 - 5u - 3 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 2u^2 + 7u + 5 \\ -u^2 - 3u - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 3u^2 + 6u - 1 \\ u + 2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2u^2 + 10u + 12 \\ -3u^2 - 8u - 4 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -2u^2 - 7u - 5 \\ u^2 + 3u + 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 32u^2 + 43u + 30$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	y^3
c_2, c_6	$y^3 - y^2 + 2y - 1$
c_3, c_4	$y^3 - 5y^2 - 2y - 1$
c_5, c_{12}	$y^3 + 3y^2 + 2y - 1$
c_7, c_{10}, c_{11}	$(y-1)^3$
c_8, c_9	$y^3 - 6y^2 + 17y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.337641+0.562280I$ $a=\ \ 2.44728+1.86942I$ $b=\ \ 0.215080-1.307140I$	$-1.37919-2.82812I$	$9.0124+12.0277I$
$u=-0.337641-0.562280I$ $a=\ \ 2.44728-1.86942I$ $b=\ \ 0.215080+1.307140I$	$-1.37919+2.82812I$	$9.0124-12.0277I$
$u=-2.32472$ $a=\ \ 0.105442$ $b=\ \ 0.569840$	2.75839	102.980

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 7u^2-5u+17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

	Solutions to I_4^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.215080+1.307140I$		
$a=$	$0.122561-0.744862I$	$-1.37919+2.82812I$	$4.28809-2.59975I$
$b=$	$0.215080+1.307140I$		
$u=$	$0.215080-1.307140I$		
$a=$	$0.122561+0.744862I$	$-1.37919-2.82812I$	$4.28809+2.59975I$
$b=$	$0.215080-1.307140I$		
$u=$	0.569840		
$a=$	1.75488	2.75839	16.4240
$b=$	0.569840		

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^6(u^{23}-12u^{22}+\cdots+303u-121)(u^{127}-5u^{126}+\cdots-1344u+64)$
c_2	$((u^3-u^2+1)^2)(u^{23}-3u^{22}+\cdots-4u+1)$ $\cdot(u^{127}+2u^{126}+\cdots+10323u+2467)$
c_3	$(u^3-u^2+2u-1)(u^3+3u^2+2u+1)(u^{23}-2u^{22}+\cdots+u+1)$ $\cdot(u^{127}-3u^{126}+\cdots+1233985982u-292939631)$
c_4	$(u^3-u^2+2u-1)(u^3+3u^2+2u+1)(u^{23}+8u^{21}+\cdots-2u+1)$ $\cdot(u^{127}+u^{126}+\cdots+17533u-1541)$
c_5	$((u^3-u^2+2u-1)^2)(u^{23}+8u^{22}+\cdots-8u+1)$ $\cdot(u^{127}+3u^{126}+\cdots-39833u+3461)$
c_6	$((u^3+u^2-1)^2)(u^{23}+3u^{22}+\cdots-4u-1)$ $\cdot(u^{127}+2u^{126}+\cdots+10323u+2467)$
c_7	$((u+1)^6)(u^{23}-4u^{22}+\cdots-6u+1)(u^{127}-5u^{126}+\cdots-361u+29)$
c_8	$((u+1)^3)(u^3-4u^2+5u-1)(u^{23}+u^{22}+\cdots-25u-1)$ $\cdot(u^{127}+u^{126}+\cdots-26u-1)$
c_9	$((u+1)^3)(u^3-4u^2+5u-1)(u^{23}-u^{22}+\cdots-10u^2-1)$ $\cdot(u^{127}-u^{126}+\cdots+3405u+207)$
c_{10}, c_{11}	$((u-1)^6)(u^{23}+4u^{22}+\cdots-6u-1)(u^{127}-5u^{126}+\cdots-361u+29)$
c_{12}	$((u^3+u^2+2u+1)^2)(u^{23}-8u^{22}+\cdots-8u-1)$ $\cdot(u^{127}+3u^{126}+\cdots-39833u+3461)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^6(y^{23}-16y^{22}+\cdots+48249y-14641)$ $\cdot(y^{127}+5y^{126}+\cdots+215040y-4096)$
c_2, c_6	$((y^3-y^2+2y-1)^2)(y^{23}-9y^{22}+\cdots+14y-1)$ $\cdot(y^{127}-82y^{126}+\cdots+357241133y-6086089)$
c_3	$(y^3-5y^2-2y-1)(y^3+3y^2+2y-1)(y^{23}-18y^{22}+\cdots-57y-1)$ $\cdot(y^{127}+37y^{126}+\cdots-3665675937186530842y-85813627410416161)$
c_4	$(y^3-5y^2-2y-1)(y^3+3y^2+2y-1)(y^{23}+16y^{22}+\cdots-2y-1)$ $\cdot(y^{127}+35y^{126}+\cdots+35832577y-2374681)$
c_5, c_{12}	$((y^3+3y^2+2y-1)^2)(y^{23}-2y^{22}+\cdots+6y-1)$ $\cdot(y^{127}+61y^{126}+\cdots+1408883241y-11978521)$
c_7, c_{10}, c_{11}	$((y-1)^6)(y^{23}-32y^{22}+\cdots+70y-1)$ $\cdot(y^{127}-141y^{126}+\cdots+115183y-841)$
c_8	$((y-1)^3)(y^3-6y^2+17y-1)(y^{23}+13y^{22}+\cdots+341y-1)$ $\cdot(y^{127}+y^{126}+\cdots+116y-1)$
c_9	$((y-1)^3)(y^3-6y^2+17y-1)(y^{23}-y^{22}+\cdots-20y-1)$ $\cdot(y^{127}-13y^{126}+\cdots+5912703y-42849)$