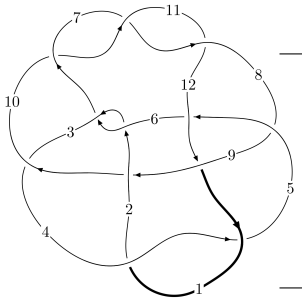
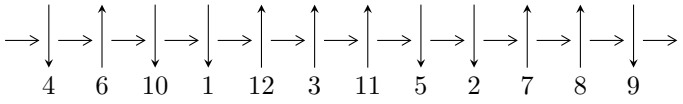
$12a_{0972}$ $(K12a_{0972})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u &= \langle -3.33659 \times 10^{517} u^{123} - 2.62653 \times 10^{518} u^{122} + \cdots + 7.25046 \times 10^{517} b - 7.78473 \times 10^{519}, \\
&\quad 7.51746 \times 10^{517} u^{123} + 5.96534 \times 10^{518} u^{122} + \cdots + 3.62523 \times 10^{517} a + 2.21034 \times 10^{520}, \\
&\quad u^{124} + 8u^{123} + \cdots + 1020u + 25 \rangle \\
I_2^u &= \langle -56752991233 u^{24} + 158661941328 u^{23} + \cdots + 5813851019 b - 156448380402, \\
&\quad 54545560767 u^{24} - 135581602385 u^{23} + \cdots + 5813851019 a + 178623668066, \\
&\quad u^{25} - 3u^{24} + \cdots + 12u - 1 \rangle \\
I_3^u &= \langle b + a - 1,\ a^2 - au - 1,\ u^2 + 1 \rangle \\
I_4^u &= \langle b^2 - bu - 1,\ a + u + 1,\ u^2 + 1 \rangle
\end{aligned}$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 157 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. $\boldsymbol{I_1^u = \langle -3.34 \times 10^{517} u^{123} - 2.63 \times 10^{518} u^{122} + \cdots + 7.25 \times 10^{517} b - 7.78 \times 10^{519},\ 7.52 \times 10^{517} u^{123} + 5.97 \times 10^{518} u^{122} + \cdots + 3.63 \times 10^{517} a + 2.21 \times 10^{520},\ u^{124} + 8u^{123} + \cdots + 1020u + 25 \rangle}$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -2.07365u^{123} - 16.4551u^{122} + \cdots - 18728.8u - 609.710 \\ 0.460190u^{123} + 3.62257u^{122} + \cdots + 3417.67u + 107.369 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2.55174u^{123} - 20.2391u^{122} + \cdots - 22231.5u - 720.432 \\ 0.501200u^{123} + 3.94634u^{122} + \cdots + 3388.10u + 106.351 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.172222u^{123} - 1.30964u^{122} + \cdots - 2393.35u - 89.8196 \\ -0.0485654u^{123} - 0.490524u^{122} + \cdots + 30.4635u + 1.72975 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2.10538u^{123} - 16.7006u^{122} + \cdots - 18765.2u - 611.590 \\ 0.491915u^{123} + 3.86811u^{122} + \cdots + 3454.04u + 109.249 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.204772u^{123} + 1.65803u^{122} + \cdots + 2202.56u + 63.8312 \\ 0.111811u^{123} + 0.849694u^{122} + \cdots + 584.422u + 21.3400 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.262764u^{123} + 2.05155u^{122} + \cdots + 2742.48u + 96.0581 \\ -0.0466158u^{123} - 0.277827u^{122} + \cdots + 11.3702u + 0.354091 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0217255u^{123} + 0.115731u^{122} + \cdots + 230.179u + 20.1115 \\ 0.156984u^{123} + 1.22636u^{122} + \cdots - 208.931u - 7.59340 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.0393133u^{123} + 0.404225u^{122} + \cdots + 637.111u + 11.6719 \\ -0.179527u^{123} - 1.42858u^{122} + \cdots + 33.3632u + 2.71980 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 2.48574u^{123} + 19.4677u^{122} + \cdots + 18568.3u + 600.544$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{124} - 8u^{123} + \cdots - 1020u + 25$
c_2, c_6	$u^{124} - 3u^{123} + \cdots + 7019u + 802$
c_3	$u^{124} + u^{123} + \cdots - 323613671u + 225151331$
c_5	$u^{124} - 3u^{123} + \cdots + 58197u + 6844$
c_7, c_{10}, c_{11}	$u^{124} - 4u^{123} + \cdots + 86u + 31$
c_8	$u^{124} + 4u^{123} + \cdots - 448142u + 166093$
c_9	$u^{124} + u^{123} + \cdots - 308331u + 65281$
c_{12}	$u^{124} - 4u^{123} + \cdots - 307u + 47$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{124} + 102y^{123} + \cdots - 108550y + 625$
c_2, c_6	$y^{124} - 87y^{123} + \cdots - 39793137y + 643204$
c_3	$y^{124} + 71y^{123} + \cdots + 2087042095852583975y + 50693121851071561$
c_5	$y^{124} - 17y^{123} + \cdots - 1045038265y + 46840336$
c_7, c_{10}, c_{11}	$y^{124} - 144y^{123} + \cdots - 148446y + 961$
c_8	$y^{124} + 56y^{123} + \cdots + 1616827756682y + 27586884649$
c_9	$y^{124} + 9y^{123} + \cdots + 12388959547y + 4261608961$
c_{12}	$y^{124} + 116y^{122} + \cdots + 46939y + 2209$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.624909 + 0.789700I$ $a = -0.853489 + 0.286122I$ $b = -0.642130 - 0.250578I$	$-0.78763 - 2.51768I$	0
$u = 0.624909 - 0.789700I$ $a = -0.853489 - 0.286122I$ $b = -0.642130 + 0.250578I$	$-0.78763 + 2.51768I$	0
$u = 0.349992 + 0.953649I$ $a = -0.271463 + 1.190640I$ $b = -0.180959 - 0.264370I$	$-0.22218 - 1.86679I$	0
$u = 0.349992 - 0.953649I$ $a = -0.271463 - 1.190640I$ $b = -0.180959 + 0.264370I$	$-0.22218 + 1.86679I$	0
$u = 0.038725 + 0.970476I$ $a = -0.88568 - 1.25933I$ $b = 0.294809 + 0.685819I$	$1.67473 - 2.05855I$	0
$u = 0.038725 - 0.970476I$ $a = -0.88568 + 1.25933I$ $b = 0.294809 - 0.685819I$	$1.67473 + 2.05855I$	0
$u = 0.657665 + 0.795735I$ $a = 1.047720 - 0.650476I$ $b = 0.636330 - 0.005582I$	$4.66580 - 2.56846I$	0
$u = 0.657665 - 0.795735I$ $a = 1.047720 + 0.650476I$ $b = 0.636330 + 0.005582I$	$4.66580 + 2.56846I$	0
$u = -0.036730 + 1.033000I$ $a = 0.160380 + 0.775791I$ $b = 1.252330 - 0.510097I$	$1.55085 + 2.30574I$	0
$u = -0.036730 - 1.033000I$ $a = 0.160380 - 0.775791I$ $b = 1.252330 + 0.510097I$	$1.55085 - 2.30574I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.011380+0.252588I$ $a=-0.0037717-0.0751418I$ $b=-0.897491+0.718876I$	$1.62126+8.65715I$	0
$u=-1.011380-0.252588I$ $a=-0.0037717+0.0751418I$ $b=-0.897491-0.718876I$	$1.62126-8.65715I$	0
$u=-0.246554+1.041700I$ $a=0.658400-0.533464I$ $b=-1.51137+0.43606I$	$4.55511-0.41818I$	0
$u=-0.246554-1.041700I$ $a=0.658400+0.533464I$ $b=-1.51137-0.43606I$	$4.55511+0.41818I$	0
$u=0.270265+0.887941I$ $a=0.71343+2.21385I$ $b=-0.546317-0.768353I$	$6.82810-1.87616I$	0
$u=0.270265-0.887941I$ $a=0.71343-2.21385I$ $b=-0.546317+0.768353I$	$6.82810+1.87616I$	0
$u=-1.071340+0.092162I$ $a=-0.208664-0.113413I$ $b=-0.170158+0.674017I$	$3.77859-0.51409I$	0
$u=-1.071340-0.092162I$ $a=-0.208664+0.113413I$ $b=-0.170158-0.674017I$	$3.77859+0.51409I$	0
$u=1.063660+0.214060I$ $a=-0.1030460-0.0422966I$ $b=-0.736144-0.498925I$	$-1.84560-3.48872I$	0
$u=1.063660-0.214060I$ $a=-0.1030460+0.0422966I$ $b=-0.736144+0.498925I$	$-1.84560+3.48872I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.200264 + 0.858804I$ $a = -0.199765 - 1.383860I$ $b = -0.307680 + 0.078714I$	$2.90937 + 0.48546I$	0
$u = 0.200264 - 0.858804I$ $a = -0.199765 + 1.383860I$ $b = -0.307680 - 0.078714I$	$2.90937 - 0.48546I$	0
$u = 1.013370 + 0.476653I$ $a = 0.676023 + 0.063001I$ $b = -0.670930 + 0.897117I$	$6.99872 + 2.80339I$	0
$u = 1.013370 - 0.476653I$ $a = 0.676023 - 0.063001I$ $b = -0.670930 - 0.897117I$	$6.99872 - 2.80339I$	0
$u = -0.799360 + 0.356881I$ $a = 0.806257 - 0.572661I$ $b = 0.875329 + 0.298254I$	$8.64858 - 5.00143I$	0
$u = -0.799360 - 0.356881I$ $a = 0.806257 + 0.572661I$ $b = 0.875329 - 0.298254I$	$8.64858 + 5.00143I$	0
$u = 0.266452 + 0.829127I$ $a = 1.83248 - 0.27359I$ $b = 0.678402 + 0.277204I$	$2.39633 - 2.88261I$	0
$u = 0.266452 - 0.829127I$ $a = 1.83248 + 0.27359I$ $b = 0.678402 - 0.277204I$	$2.39633 + 2.88261I$	0
$u = -0.220377 + 1.122260I$ $a = -0.08409 + 1.54094I$ $b = 1.10225 - 1.21547I$	$2.13812 + 3.26916I$	0
$u = -0.220377 - 1.122260I$ $a = -0.08409 - 1.54094I$ $b = 1.10225 + 1.21547I$	$2.13812 - 3.26916I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.033525+1.161790I$ $a=-0.319448-0.632001I$ $b=-1.307690+0.414071I$	$7.68363+3.54824I$	0
$u=-0.033525-1.161790I$ $a=-0.319448+0.632001I$ $b=-1.307690-0.414071I$	$7.68363-3.54824I$	0
$u=-0.609912+0.568440I$ $a=1.034620-0.462126I$ $b=-0.563121-0.762549I$	$5.17196-3.18037I$	0
$u=-0.609912-0.568440I$ $a=1.034620+0.462126I$ $b=-0.563121+0.762549I$	$5.17196+3.18037I$	0
$u=-0.029257+1.167110I$ $a=0.131424-1.388300I$ $b=-0.87769+1.11781I$	$3.66761-0.84831I$	0
$u=-0.029257-1.167110I$ $a=0.131424+1.388300I$ $b=-0.87769-1.11781I$	$3.66761+0.84831I$	0
$u=-0.438960+1.099790I$ $a=0.24387+1.89941I$ $b=0.482558-0.359313I$	$10.9005+9.5975I$	0
$u=-0.438960-1.099790I$ $a=0.24387-1.89941I$ $b=0.482558+0.359313I$	$10.9005-9.5975I$	0
$u=-0.349173+1.141460I$ $a=-0.19828-1.61269I$ $b=-0.99534+1.37906I$	$7.19616+6.93974I$	0
$u=-0.349173-1.141460I$ $a=-0.19828+1.61269I$ $b=-0.99534-1.37906I$	$7.19616-6.93974I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.190790+0.154668I$ $a=\ \ 0.371080+0.177841I$ $b=\ \ 0.341879-0.816022I$	$10.80650-1.25200I$	0
$u=-1.190790-0.154668I$ $a=\ \ 0.371080-0.177841I$ $b=\ \ 0.341879+0.816022I$	$10.80650+1.25200I$	0
$u=\ \ 0.780504+0.066163I$ $a=-0.128713+0.108564I$ $b=\ \ 0.844438+0.324862I$	$-1.95401-0.57152I$	0
$u=\ \ 0.780504-0.066163I$ $a=-0.128713-0.108564I$ $b=\ \ 0.844438-0.324862I$	$-1.95401+0.57152I$	0
$u=-0.290920+1.185870I$ $a=\ \ 0.31212-1.72148I$ $b=-0.253177+0.413757I$	$4.68545+6.23430I$	0
$u=-0.290920-1.185870I$ $a=\ \ 0.31212+1.72148I$ $b=-0.253177-0.413757I$	$4.68545-6.23430I$	0
$u=\ \ 0.690267+0.316922I$ $a=-0.995755-0.423093I$ $b=\ \ 0.840804-0.709923I$	$0.16376+2.13777I$	0
$u=\ \ 0.690267-0.316922I$ $a=-0.995755+0.423093I$ $b=\ \ 0.840804+0.709923I$	$0.16376-2.13777I$	0
$u=\ \ 0.395846+1.178580I$ $a=-0.16684-1.61000I$ $b=\ \ 1.06584+1.46196I$	$2.91555-6.35209I$	0
$u=\ \ 0.395846-1.178580I$ $a=-0.16684+1.61000I$ $b=\ \ 1.06584-1.46196I$	$2.91555+6.35209I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.596773 + 1.098550I$ $a = -0.25305 + 1.50933I$ $b = -0.85387 - 1.45213I$	$9.03984 - 8.60000I$	0
$u = 0.596773 - 1.098550I$ $a = -0.25305 - 1.50933I$ $b = -0.85387 + 1.45213I$	$9.03984 + 8.60000I$	0
$u = -0.060754 + 1.248950I$ $a = 0.38576 + 1.97999I$ $b = -0.98013 - 1.70592I$	$7.48407 + 3.86950I$	0
$u = -0.060754 - 1.248950I$ $a = 0.38576 - 1.97999I$ $b = -0.98013 + 1.70592I$	$7.48407 - 3.86950I$	0
$u = -0.002976 + 1.259540I$ $a = 0.22912 - 2.04140I$ $b = 0.59661 + 1.30966I$	$7.65870 - 2.89944I$	0
$u = -0.002976 - 1.259540I$ $a = 0.22912 + 2.04140I$ $b = 0.59661 - 1.30966I$	$7.65870 + 2.89944I$	0
$u = 0.141193 + 1.263160I$ $a = 0.81534 + 1.28478I$ $b = -1.55246 - 1.20153I$	$5.07326 - 2.77050I$	0
$u = 0.141193 - 1.263160I$ $a = 0.81534 - 1.28478I$ $b = -1.55246 + 1.20153I$	$5.07326 + 2.77050I$	0
$u = -0.148783 + 1.262330I$ $a = -0.57776 - 1.52603I$ $b = 1.29356 + 1.51745I$	$15.0989 + 8.7503I$	0
$u = -0.148783 - 1.262330I$ $a = -0.57776 + 1.52603I$ $b = 1.29356 - 1.51745I$	$15.0989 - 8.7503I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.582223+0.430669I$ $a=-0.807574+0.937034I$ $b=\ \ 0.795687+0.282579I$	$0.186508-0.358873I$	0
$u=-0.582223-0.430669I$ $a=-0.807574-0.937034I$ $b=\ \ 0.795687-0.282579I$	$0.186508+0.358873I$	0
$u=\ \ 0.081403+1.299880I$ $a=-0.51855+1.64065I$ $b=-0.785286-0.992413I$	$15.6448-7.6267I$	0
$u=\ \ 0.081403-1.299880I$ $a=-0.51855-1.64065I$ $b=-0.785286+0.992413I$	$15.6448+7.6267I$	0
$u=-1.281450+0.242845I$ $a=-0.0408311+0.0638631I$ $b=\ \ 0.800570-0.747453I$	$9.7223+12.0177I$	0
$u=-1.281450-0.242845I$ $a=-0.0408311-0.0638631I$ $b=\ \ 0.800570+0.747453I$	$9.7223-12.0177I$	0
$u=-0.115983+1.313350I$ $a=-0.728401+1.047250I$ $b=-0.012768-0.426251I$	$5.94688+1.48446I$	0
$u=-0.115983-1.313350I$ $a=-0.728401-1.047250I$ $b=-0.012768+0.426251I$	$5.94688-1.48446I$	0
$u=\ \ 0.066845+1.328250I$ $a=-0.222917+1.234220I$ $b=\ \ 0.93865-1.26825I$	$11.16820-3.35347I$	0
$u=\ \ 0.066845-1.328250I$ $a=-0.222917-1.234220I$ $b=\ \ 0.93865+1.26825I$	$11.16820+3.35347I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.604253+0.284274I$ $a=\ 0.160861+0.209823I$ $b=\ 1.024820-0.722652I$	$-0.03123+3.63182I$	0
$u=-0.604253-0.284274I$ $a=\ 0.160861-0.209823I$ $b=\ 1.024820+0.722652I$	$-0.03123-3.63182I$	0
$u=\ 1.361590+0.259806I$ $a=\ 0.134042-0.046505I$ $b=\ 0.642655+0.623399I$	$5.07896-5.21597I$	0
$u=\ 1.361590-0.259806I$ $a=\ 0.134042+0.046505I$ $b=\ 0.642655-0.623399I$	$5.07896+5.21597I$	0
$u=\ 0.115361+0.594013I$ $a=\ 0.183050-1.248340I$ $b=-0.617168-0.084784I$	$2.92156+0.53654I$	0
$u=\ 0.115361-0.594013I$ $a=\ 0.183050+1.248340I$ $b=-0.617168+0.084784I$	$2.92156-0.53654I$	0
$u=\ 0.035448+0.595180I$ $a=\ 2.31588-0.64381I$ $b=-1.57212+0.38454I$	$2.11788+1.98122I$	0
$u=\ 0.035448-0.595180I$ $a=\ 2.31588+0.64381I$ $b=-1.57212-0.38454I$	$2.11788-1.98122I$	0
$u=\ 0.38607+1.36862I$ $a=-0.363176-1.353110I$ $b=\ 1.04682+1.11374I$	$2.61430-4.84266I$	0
$u=\ 0.38607-1.36862I$ $a=-0.363176+1.353110I$ $b=\ 1.04682-1.11374I$	$2.61430+4.84266I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.292312 + 0.489399I$ $a = 0.199051 - 0.458548I$ $b = -1.39633 + 0.54910I$	$5.76997 - 0.74612I$	0
$u = 0.292312 - 0.489399I$ $a = 0.199051 + 0.458548I$ $b = -1.39633 - 0.54910I$	$5.76997 + 0.74612I$	0
$u = -0.48655 + 1.34999I$ $a = -0.289379 - 1.255350I$ $b = -0.694847 + 1.007670I$	$8.26791 + 4.86057I$	0
$u = -0.48655 - 1.34999I$ $a = -0.289379 + 1.255350I$ $b = -0.694847 - 1.007670I$	$8.26791 - 4.86057I$	0
$u = -0.535208 + 0.098659I$ $a = -0.78607 + 1.44928I$ $b = -0.847060 - 0.155911I$	$1.50743 - 2.98404I$	0
$u = -0.535208 - 0.098659I$ $a = -0.78607 - 1.44928I$ $b = -0.847060 + 0.155911I$	$1.50743 + 2.98404I$	0
$u = -0.27166 + 1.43808I$ $a = -0.60645 + 1.74606I$ $b = 1.25703 - 1.39510I$	$5.51165 + 6.94398I$	0
$u = -0.27166 - 1.43808I$ $a = -0.60645 - 1.74606I$ $b = 1.25703 + 1.39510I$	$5.51165 - 6.94398I$	0
$u = 0.43515 + 1.40233I$ $a = -0.136616 - 0.696627I$ $b = 0.511825 + 0.563146I$	$2.33121 - 3.38566I$	0
$u = 0.43515 - 1.40233I$ $a = -0.136616 + 0.696627I$ $b = 0.511825 - 0.563146I$	$2.33121 + 3.38566I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.53394+1.37569I$ $a=\ 0.277630+1.121480I$ $b=\ 0.344681-1.123800I$	$7.91427+6.40094I$	0
$u=-0.53394-1.37569I$ $a=\ 0.277630-1.121480I$ $b=\ 0.344681+1.123800I$	$7.91427-6.40094I$	0
$u=-0.68743+1.30596I$ $a=\ 0.419653+0.188089I$ $b=-0.122827-0.473467I$	$4.33526-2.51765I$	0
$u=-0.68743-1.30596I$ $a=\ 0.419653-0.188089I$ $b=-0.122827+0.473467I$	$4.33526+2.51765I$	0
$u=\ 0.46522+1.40387I$ $a=\ 0.134818+1.328190I$ $b=-1.09069-1.08181I$	$3.16484-8.86238I$	0
$u=\ 0.46522-1.40387I$ $a=\ 0.134818-1.328190I$ $b=-1.09069+1.08181I$	$3.16484+8.86238I$	0
$u=-0.43002+1.44348I$ $a=\ 0.24949-1.55537I$ $b=-1.16636+1.25954I$	$6.9765+13.7973I$	0
$u=-0.43002-1.44348I$ $a=\ 0.24949+1.55537I$ $b=-1.16636-1.25954I$	$6.9765-13.7973I$	0
$u=-0.101430+0.473608I$ $a=\ 2.81834-0.97751I$ $b=-0.288841-0.487196I$	$5.59899-3.09249I$	$8.90713+0.I$
$u=-0.101430-0.473608I$ $a=\ 2.81834+0.97751I$ $b=-0.288841+0.487196I$	$5.59899+3.09249I$	$8.90713+0.I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.49838+1.43173I$ $a=\ \ 0.301067+1.199040I$ $b=\ \ 0.889618-0.943728I$	$15.8333+4.5792I$	0
$u=-0.49838-1.43173I$ $a=\ \ 0.301067-1.199040I$ $b=\ \ 0.889618+0.943728I$	$15.8333-4.5792I$	0
$u=-0.14267+1.52286I$ $a=-0.425047-0.509529I$ $b=\ \ 1.112710+0.556637I$	$15.0819-1.6516I$	0
$u=-0.14267-1.52286I$ $a=-0.425047+0.509529I$ $b=\ \ 1.112710-0.556637I$	$15.0819+1.6516I$	0
$u=\ \ 0.51929+1.48104I$ $a=-0.036046-1.242720I$ $b=\ \ 1.12719+1.06290I$	$10.5364-11.5662I$	0
$u=\ \ 0.51929-1.48104I$ $a=-0.036046+1.242720I$ $b=\ \ 1.12719-1.06290I$	$10.5364+11.5662I$	0
$u=-0.61500+1.44586I$ $a=-0.304008-0.973397I$ $b=-0.179648+1.242880I$	$14.9283+7.9258I$	0
$u=-0.61500-1.44586I$ $a=-0.304008+0.973397I$ $b=-0.179648-1.242880I$	$14.9283-7.9258I$	0
$u=-0.52705+1.48373I$ $a=-0.11920+1.42093I$ $b=\ \ 1.15290-1.23181I$	$15.1210+18.2859I$	0
$u=-0.52705-1.48373I$ $a=-0.11920-1.42093I$ $b=\ \ 1.15290+1.23181I$	$15.1210-18.2859I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.03557+1.59893I$ $a=1.48233-0.63793I$ $b=-1.90550+0.62040I$	$13.09920-1.07183I$	0
$u=-0.03557-1.59893I$ $a=1.48233+0.63793I$ $b=-1.90550-0.62040I$	$13.09920+1.07183I$	0
$u=0.07284+1.62369I$ $a=0.350406-0.365184I$ $b=0.301197+0.400851I$	$14.8060-1.2582I$	0
$u=0.07284-1.62369I$ $a=0.350406+0.365184I$ $b=0.301197-0.400851I$	$14.8060+1.2582I$	0
$u=0.43257+1.58022I$ $a=0.148827+0.857592I$ $b=-0.609393-1.016200I$	$10.49490-2.70483I$	0
$u=0.43257-1.58022I$ $a=0.148827-0.857592I$ $b=-0.609393+1.016200I$	$10.49490+2.70483I$	0
$u=-0.144359+0.217920I$ $a=-1.32019+2.13894I$ $b=0.190926+0.455290I$	$0.095467-1.146130I$	$1.33446+5.20853I$
$u=-0.144359-0.217920I$ $a=-1.32019-2.13894I$ $b=0.190926-0.455290I$	$0.095467+1.146130I$	$1.33446-5.20853I$
$u=-0.137483+0.053618I$ $a=1.88691+9.62828I$ $b=0.174139-1.062900I$	$11.29770-7.33389I$	$7.61770+3.62503I$
$u=-0.137483-0.053618I$ $a=1.88691-9.62828I$ $b=0.174139+1.062900I$	$11.29770+7.33389I$	$7.61770-3.62503I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.1074230+0.0204538I$ $a=-2.29690-7.62971I$ $b=-0.195075+1.214220I$	$3.75165-3.18681I$	$7.79230+9.47115I$
$u=-0.1074230-0.0204538I$ $a=-2.29690+7.62971I$ $b=-0.195075-1.214220I$	$3.75165+3.18681I$	$7.79230-9.47115I$
$u=-0.97511+1.97865I$ $a=-0.129208-0.152014I$ $b=-0.085980+0.379628I$	$13.44110-3.50918I$	0
$u=-0.97511-1.97865I$ $a=-0.129208+0.152014I$ $b=-0.085980-0.379628I$	$13.44110+3.50918I$	0

II.

$\boldsymbol{I_2^u = \langle -5.68\times 10^{10}u^{24}+1.59\times 10^{11}u^{23}+\cdots+5.81\times 10^{9}b-1.56\times 10^{11},\ 5.45\times 10^{10}u^{24}-1.36\times 10^{11}u^{23}+\cdots+5.81\times 10^{9}a+1.79\times 10^{11},\ u^{25}-3u^{24}+\cdots+12u-1\rangle}$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -9.38200u^{24} + 23.3204u^{23} + \cdots + 257.610u - 30.7238 \\ 9.76169u^{24} - 27.2903u^{23} + \cdots - 260.709u + 26.9096 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -22.5428u^{24} + 58.9665u^{23} + \cdots + 566.844u - 62.4590 \\ 10.0858u^{24} - 26.6485u^{23} + \cdots - 227.833u + 23.0732 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 15.1635u^{24} - 34.1351u^{23} + \cdots - 227.440u + 26.2036 \\ 0.0247429u^{24} - 3.38012u^{23} + \cdots - 75.5561u + 6.67925 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -13.3618u^{24} + 32.6426u^{23} + \cdots + 291.960u - 33.5546 \\ 13.7415u^{24} - 36.6125u^{23} + \cdots - 295.059u + 29.7404 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 3.58211u^{24} - 3.74055u^{23} + \cdots + 28.9720u + 1.80463 \\ 8.82286u^{24} - 20.9033u^{23} + \cdots - 79.4184u + 3.70537 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 24.1743u^{24} - 52.5145u^{23} + \cdots - 215.662u + 20.1633 \\ 4.38131u^{24} - 13.2049u^{23} + \cdots - 127.203u + 11.3084 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 6.89964u^{24} - 2.83690u^{23} + \cdots + 285.884u - 32.9364 \\ 3.55480u^{24} - 7.84830u^{23} + \cdots - 73.5124u + 7.87747 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 7.45497u^{24} - 6.18940u^{23} + \cdots + 259.080u - 33.2308 \\ 2.81610u^{24} - 5.60481u^{23} + \cdots - 34.7801u + 3.55480 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= \frac{38880606157}{5813851019}u^{24} - \frac{204299857999}{5813851019}u^{23} + \cdots - \frac{5343011314076}{5813851019}u + \frac{647995598087}{5813851019}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{25} - 3u^{24} + \cdots + 12u - 1$
c_2	$u^{25} + 2u^{24} + \cdots - u + 1$
c_3	$u^{25} + 2u^{23} + \cdots - u - 1$
c_4	$u^{25} + 3u^{24} + \cdots + 12u + 1$
c_5	$u^{25} + 4u^{24} + \cdots - u + 1$
c_6	$u^{25} - 2u^{24} + \cdots - u - 1$
c_7	$u^{25} - 5u^{24} + \cdots + 2u + 1$
c_8	$u^{25} - u^{24} + \cdots + 5u^2 + 1$
c_9	$u^{25} - 2u^{23} + \cdots + u + 1$
c_{10}, c_{11}	$u^{25} + 5u^{24} + \cdots + 2u - 1$
c_{12}	$u^{25} - 5u^{24} + \cdots + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{25} + 23y^{24} + \cdots + 12y - 1$
c_2, c_6	$y^{25} - 14y^{24} + \cdots + 19y - 1$
c_3	$y^{25} + 4y^{24} + \cdots - 41y - 1$
c_5	$y^{25} + 30y^{23} + \cdots + y - 1$
c_7, c_{10}, c_{11}	$y^{25} - 35y^{24} + \cdots - 20y - 1$
c_8	$y^{25} + 11y^{24} + \cdots - 10y - 1$
c_9	$y^{25} - 4y^{24} + \cdots + y - 1$
c_{12}	$y^{25} - 3y^{24} + \cdots + 11y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.396533 + 0.918439I$ $a = 0.246592 - 0.656324I$ $b = 0.801411 + 0.091216I$	$2.78380 - 1.71389I$	$1.54455 + 2.94870I$
$u = 0.396533 - 0.918439I$ $a = 0.246592 + 0.656324I$ $b = 0.801411 - 0.091216I$	$2.78380 + 1.71389I$	$1.54455 - 2.94870I$
$u = -0.522963 + 0.749559I$ $a = -0.254600 + 0.036431I$ $b = 0.416621 - 0.514156I$	$3.86969 - 1.94885I$	$6.67029 + 1.25514I$
$u = -0.522963 - 0.749559I$ $a = -0.254600 - 0.036431I$ $b = 0.416621 + 0.514156I$	$3.86969 + 1.94885I$	$6.67029 - 1.25514I$
$u = 0.599632 + 0.688427I$ $a = -0.990660 + 0.161060I$ $b = -0.660665 - 0.309143I$	$-0.80491 - 2.72003I$	$-1.4684 + 21.3189I$
$u = 0.599632 - 0.688427I$ $a = -0.990660 - 0.161060I$ $b = -0.660665 + 0.309143I$	$-0.80491 + 2.72003I$	$-1.4684 - 21.3189I$
$u = -0.454087 + 1.030360I$ $a = 1.03190 + 1.63681I$ $b = 0.113347 - 0.973124I$	$12.0422 + 9.0646I$	$9.38473 - 6.78978I$
$u = -0.454087 - 1.030360I$ $a = 1.03190 - 1.63681I$ $b = 0.113347 + 0.973124I$	$12.0422 - 9.0646I$	$9.38473 + 6.78978I$
$u = 0.673443 + 0.377672I$ $a = -1.022940 - 0.727811I$ $b = 0.797515 - 0.772015I$	$4.43310 + 3.33564I$	$-0.43428 - 4.34078I$
$u = 0.673443 - 0.377672I$ $a = -1.022940 + 0.727811I$ $b = 0.797515 + 0.772015I$	$4.43310 - 3.33564I$	$-0.43428 + 4.34078I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.445519 + 1.181260I$ $a = 0.11767 - 1.61358I$ $b = 0.98415 + 1.46104I$	$6.96031 - 7.72852I$	$4.03159 + 8.91256I$
$u = 0.445519 - 1.181260I$ $a = 0.11767 + 1.61358I$ $b = 0.98415 - 1.46104I$	$6.96031 + 7.72852I$	$4.03159 - 8.91256I$
$u = 0.528550 + 0.447594I$ $a = 1.84401 + 0.70055I$ $b = 0.634465 + 0.380510I$	$4.87746 - 3.64656I$	$1.63258 + 6.77129I$
$u = 0.528550 - 0.447594I$ $a = 1.84401 - 0.70055I$ $b = 0.634465 - 0.380510I$	$4.87746 + 3.64656I$	$1.63258 - 6.77129I$
$u = -0.318652 + 1.283850I$ $a = -0.13770 - 1.74819I$ $b = -0.442802 + 1.266680I$	$6.26588 + 5.52732I$	$6.98548 - 5.31379I$
$u = -0.318652 - 1.283850I$ $a = -0.13770 + 1.74819I$ $b = -0.442802 - 1.266680I$	$6.26588 - 5.52732I$	$6.98548 + 5.31379I$
$u = 0.350396 + 1.325240I$ $a = 0.41285 + 1.48160I$ $b = -1.15583 - 1.30583I$	$3.29730 - 5.21881I$	$8.57149 + 5.00846I$
$u = 0.350396 - 1.325240I$ $a = 0.41285 - 1.48160I$ $b = -1.15583 + 1.30583I$	$3.29730 + 5.21881I$	$8.57149 - 5.00846I$
$u = 0.424493 + 0.266239I$ $a = 1.44747 + 0.85701I$ $b = -0.981579 + 0.594218I$	$-0.42081 + 1.85133I$	$-5.86069 - 1.68765I$
$u = 0.424493 - 0.266239I$ $a = 1.44747 - 0.85701I$ $b = -0.981579 - 0.594218I$	$-0.42081 - 1.85133I$	$-5.86069 + 1.68765I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.01425+1.64121I$ $a=-1.286330+0.308438I$ $b=\ \ 1.69344-0.22865I$	$12.91170-0.79888I$	$3.16117-8.46251I$
$u=-0.01425-1.64121I$ $a=-1.286330-0.308438I$ $b=\ \ 1.69344+0.22865I$	$12.91170+0.79888I$	$3.16117+8.46251I$
$u=\ \ 0.270555$ $a=-2.92223$ $b=\ \ 1.20005$	5.82532	8.15020
$u=-0.74389+1.89057I$ $a=\ \ 0.0528490+0.0450918I$ $b=-0.300101+0.199881I$	$13.24880-3.52025I$	0
$u=-0.74389-1.89057I$ $a=\ \ 0.0528490-0.0450918I$ $b=-0.300101-0.199881I$	$13.24880+3.52025I$	0

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4au+8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -0.866025 + 0.500000I$ $b = 1.86603 - 0.50000I$	$3.28987 - 2.02988I$	$6.00000 + 3.46410I$
$u = 1.000000I$ $a = 0.866025 + 0.500000I$ $b = 0.133975 - 0.500000I$	$3.28987 + 2.02988I$	$6.00000 - 3.46410I$
$u = -1.000000I$ $a = -0.866025 - 0.500000I$ $b = 1.86603 + 0.50000I$	$3.28987 + 2.02988I$	$6.00000 - 3.46410I$
$u = -1.000000I$ $a = 0.866025 - 0.500000I$ $b = 0.133975 + 0.500000I$	$3.28987 - 2.02988I$	$6.00000 + 3.46410I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 4bu + 8$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -1.00000 - 1.00000I$ $b = -0.866025 + 0.500000I$	$3.28987 - 2.02988I$	$6.00000 + 3.46410I$
$u = 1.000000I$ $a = -1.00000 - 1.00000I$ $b = 0.866025 + 0.500000I$	$3.28987 + 2.02988I$	$6.00000 - 3.46410I$
$u = -1.000000I$ $a = -1.00000 + 1.00000I$ $b = -0.866025 - 0.500000I$	$3.28987 + 2.02988I$	$6.00000 - 3.46410I$
$u = -1.000000I$ $a = -1.00000 + 1.00000I$ $b = 0.866025 - 0.500000I$	$3.28987 - 2.02988I$	$6.00000 + 3.46410I$

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2+1)^4)(u^{25}-3u^{24}+\cdots+12u-1)(u^{124}-8u^{123}+\cdots-1020u+25)$
c_2	$((u^4-u^2+1)^2)(u^{25}+2u^{24}+\cdots-u+1)$ $\cdot(u^{124}-3u^{123}+\cdots+7019u+802)$
c_3	$((u^2+u+1)^2)(u^4-2u^3+\cdots-4u+1)(u^{25}+2u^{23}+\cdots-u-1)$ $\cdot(u^{124}+u^{123}+\cdots-323613671u+225151331)$
c_4	$((u^2+1)^4)(u^{25}+3u^{24}+\cdots+12u+1)(u^{124}-8u^{123}+\cdots-1020u+25)$
c_5	$((u^2-u+1)^4)(u^{25}+4u^{24}+\cdots-u+1)$ $\cdot(u^{124}-3u^{123}+\cdots+58197u+6844)$
c_6	$((u^4-u^2+1)^2)(u^{25}-2u^{24}+\cdots-u-1)$ $\cdot(u^{124}-3u^{123}+\cdots+7019u+802)$
c_7	$((u+1)^8)(u^{25}-5u^{24}+\cdots+2u+1)(u^{124}-4u^{123}+\cdots+86u+31)$
c_8	$((u^2+1)^2)(u^4-2u^3+\cdots-4u+1)(u^{25}-u^{24}+\cdots+5u^2+1)$ $\cdot(u^{124}+4u^{123}+\cdots-448142u+166093)$
c_9	$((u+1)^4)(u^4-4u^3+\cdots-2u+1)(u^{25}-2u^{23}+\cdots+u+1)$ $\cdot(u^{124}+u^{123}+\cdots-308331u+65281)$
c_{10}, c_{11}	$((u-1)^8)(u^{25}+5u^{24}+\cdots+2u-1)(u^{124}-4u^{123}+\cdots+86u+31)$
c_{12}	$(u^4-u^2+1)(u^4-4u^3+\cdots-2u+1)(u^{25}-5u^{24}+\cdots+u-1)$ $\cdot(u^{124}-4u^{123}+\cdots-307u+47)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y+1)^8)(y^{25}+23y^{24}+\cdots+12y-1)$ $\cdot(y^{124}+102y^{123}+\cdots-108550y+625)$
c_2, c_6	$((y^2-y+1)^4)(y^{25}-14y^{24}+\cdots+19y-1)$ $\cdot(y^{124}-87y^{123}+\cdots-39793137y+643204)$
c_3	$((y^2+y+1)^2)(y^4+6y^3+\cdots-6y+1)(y^{25}+4y^{24}+\cdots-41y-1)$ $\cdot(y^{124}+71y^{123}+\cdots+2087042095852583975y+50693121851071561)$
c_5	$((y^2+y+1)^4)(y^{25}+30y^{23}+\cdots+y-1)$ $\cdot(y^{124}-17y^{123}+\cdots-1045038265y+46840336)$
c_7, c_{10}, c_{11}	$((y-1)^8)(y^{25}-35y^{24}+\cdots-20y-1)$ $\cdot(y^{124}-144y^{123}+\cdots-148446y+961)$
c_8	$((y+1)^4)(y^4+6y^3+\cdots-6y+1)(y^{25}+11y^{24}+\cdots-10y-1)$ $\cdot(y^{124}+56y^{123}+\cdots+1616827756682y+27586884649)$
c_9	$((y-1)^4)(y^4-6y^3+\cdots+6y+1)(y^{25}-4y^{24}+\cdots+y-1)$ $\cdot(y^{124}+9y^{123}+\cdots+12388959547y+4261608961)$
c_{12}	$((y^2-y+1)^2)(y^4-6y^3+\cdots+6y+1)(y^{25}-3y^{24}+\cdots+11y-1)$ $\cdot(y^{124}+116y^{122}+\cdots+46939y+2209)$