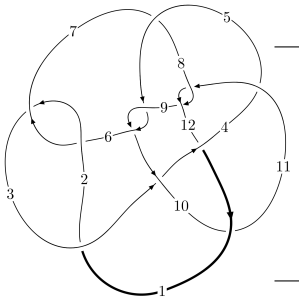
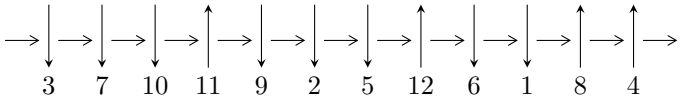
$12a_{0645}$ $(K12a_{0645})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned} I_1^u = \langle & -2.97362 \times 10^{478} u^{159} + 7.20508 \times 10^{478} u^{158} + \cdots + 4.01845 \times 10^{476} b - 1.56559 \times 10^{480}, \\ & - 3.29775 \times 10^{480} u^{159} + 6.08538 \times 10^{480} u^{158} + \cdots + 7.75561 \times 10^{478} a - 2.13475 \times 10^{482}, \\ & 3u^{160} - u^{159} + \cdots + 331u + 193 \rangle \\ I_2^u = \langle & 212681736u^{30} - 995826957u^{29} + \cdots + 135981283b + 1205561889, \\ & 4200084636u^{30} - 2960109407u^{29} + \cdots + 135981283a + 2781584870,\ 3u^{31} - 4u^{30} + \cdots + 6u - 1 \rangle \end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 191 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. $\boldsymbol{I_1^u = \langle -2.97 \times 10^{478} u^{159} + 7.21 \times 10^{478} u^{158} + \cdots + 4.02 \times 10^{476} b - 1.57 \times 10^{480},\ -3.30 \times 10^{480} u^{159} + 6.09 \times 10^{480} u^{158} + \cdots + 7.76 \times 10^{478} a - 2.13 \times 10^{482},\ 3u^{160} - u^{159} + \cdots + 331u + 193 \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 42.5208u^{159} - 78.4642u^{158} + \cdots + 3808.29u + 2752.52 \\ 73.9991u^{159} - 179.300u^{158} + \cdots + 8415.82u + 3896.00 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 94.2155u^{159} - 135.360u^{158} + \cdots + 3663.40u + 3322.32 \\ 74.6958u^{159} - 139.263u^{158} + \cdots + 2966.73u + 1181.62 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 99.5335u^{159} - 156.029u^{158} + \cdots + 9476.32u + 7456.67 \\ 140.093u^{159} - 275.547u^{158} + \cdots + 14805.5u + 8626.39 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 123.309u^{159} - 190.843u^{158} + \cdots + 11751.0u + 8564.58 \\ 154.787u^{159} - 291.679u^{158} + \cdots + 16358.6u + 9708.06 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 53.1586u^{159} - 67.3439u^{158} + \cdots + 2128.47u + 2393.64 \\ 43.2850u^{159} - 61.1105u^{158} + \cdots + 1169.30u + 903.031 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -149.073u^{159} + 163.399u^{158} + \cdots - 8258.49u - 11218.9 \\ -250.944u^{159} + 314.969u^{158} + \cdots - 13101.3u - 14923.1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 160.802u^{159} - 177.065u^{158} + \cdots + 9052.96u + 11563.7 \\ 257.386u^{159} - 322.104u^{158} + \cdots + 13806.7u + 15180.7 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -69.5462u^{159} + 85.0726u^{158} + \cdots - 2339.28u - 2896.34$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$9(9u^{160}+625u^{159}+\cdots+662313u+37249)$
c_2, c_6	$3(3u^{160}+u^{159}+\cdots-331u+193)$
c_3	$u^{160}+2u^{159}+\cdots+138410u+38043$
c_4	$u^{160}-3u^{159}+\cdots+8419865u-580297$
c_5, c_9	$u^{160}-4u^{159}+\cdots+5365970u+823609$
c_7	$u^{160}-10u^{159}+\cdots-10677820u+828069$
c_8, c_{11}	$3(3u^{160}+7u^{159}+\cdots+27391u+4289)$
c_{10}	$u^{160}-6u^{159}+\cdots-13655574u+592191$
c_{12}	$9(9u^{160}+139u^{159}+\cdots+7244u+959)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$81(81y^{160}+2819y^{159}+\cdots+7.77369\times10^{11}y+1.38749\times10^{9})$
c_2, c_6	$9(9y^{160}-625y^{159}+\cdots-662313y+37249)$
c_3	$y^{160}-10y^{159}+\cdots+181994273540y+1447269849$
c_4	$y^{160}-7y^{159}+\cdots-29142125376523y+336744608209$
c_5, c_9	$y^{160}-76y^{159}+\cdots-6823756896730y+678331784881$
c_7	$y^{160}+22y^{159}+\cdots+33389274231554y+685698268761$
c_8, c_{11}	$9(9y^{160}-787y^{159}+\cdots-5.87148\times10^{8}y+1.83955\times10^{7})$
c_{10}	$y^{160}+6y^{159}+\cdots+12702120885144y+350690180481$
c_{12}	$81(81y^{160}-583y^{159}+\cdots-1.15876\times10^{7}y+919681)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.858523+0.512712I$ $a=\ 1.50494+4.91958I$ $b=\ 5.05179+1.41604I$	$-0.20205+2.08088I$	0
$u=-0.858523-0.512712I$ $a=\ 1.50494-4.91958I$ $b=\ 5.05179-1.41604I$	$-0.20205-2.08088I$	0
$u=-0.399566+0.920691I$ $a=-0.653839-0.918014I$ $b=-0.927677+0.110718I$	$5.92805-3.86382I$	0
$u=-0.399566-0.920691I$ $a=-0.653839+0.918014I$ $b=-0.927677-0.110718I$	$5.92805+3.86382I$	0
$u=-0.890101+0.442528I$ $a=\ 0.766212+0.910700I$ $b=-0.494498+0.090076I$	$-3.91659+3.92649I$	0
$u=-0.890101-0.442528I$ $a=\ 0.766212-0.910700I$ $b=-0.494498-0.090076I$	$-3.91659-3.92649I$	0
$u=\ 0.345258+0.919207I$ $a=\ 0.514884-1.212210I$ $b=\ 0.559264+0.062755I$	$4.64153+5.08652I$	0
$u=\ 0.345258-0.919207I$ $a=\ 0.514884+1.212210I$ $b=\ 0.559264-0.062755I$	$4.64153-5.08652I$	0
$u=-0.876818+0.441280I$ $a=\ 0.037704-0.249262I$ $b=\ 1.44747+0.47428I$	$-3.87061-0.30555I$	0
$u=-0.876818-0.441280I$ $a=\ 0.037704+0.249262I$ $b=\ 1.44747-0.47428I$	$-3.87061+0.30555I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.598820 + 0.765579I$ $a = -0.582350 + 1.040930I$ $b = -1.66724 + 0.31489I$	$6.42128 + 7.98934I$	0
$u = 0.598820 - 0.765579I$ $a = -0.582350 - 1.040930I$ $b = -1.66724 - 0.31489I$	$6.42128 - 7.98934I$	0
$u = 0.875198 + 0.546004I$ $a = 2.33898 + 1.12309I$ $b = 0.05287 + 2.88551I$	$-0.08564 - 1.61768I$	0
$u = 0.875198 - 0.546004I$ $a = 2.33898 - 1.12309I$ $b = 0.05287 - 2.88551I$	$-0.08564 + 1.61768I$	0
$u = 0.599472 + 0.755917I$ $a = 0.536468 - 0.671135I$ $b = 1.379940 - 0.295092I$	$2.52740 + 3.16960I$	0
$u = 0.599472 - 0.755917I$ $a = 0.536468 + 0.671135I$ $b = 1.379940 + 0.295092I$	$2.52740 - 3.16960I$	0
$u = -0.875532 + 0.402402I$ $a = -1.32734 - 1.50867I$ $b = -2.14051 - 2.03517I$	$1.20283 - 5.35350I$	0
$u = -0.875532 - 0.402402I$ $a = -1.32734 + 1.50867I$ $b = -2.14051 + 2.03517I$	$1.20283 + 5.35350I$	0
$u = 0.520979 + 0.809128I$ $a = -1.44567 + 0.74943I$ $b = -1.051720 - 0.592214I$	$-2.00969 + 2.22775I$	0
$u = 0.520979 - 0.809128I$ $a = -1.44567 - 0.74943I$ $b = -1.051720 + 0.592214I$	$-2.00969 - 2.22775I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.964376 + 0.391414I$ $a = 0.210562 - 1.129790I$ $b = 0.517869 - 0.633031I$	$-2.32367 - 1.28895I$	0
$u = 0.964376 - 0.391414I$ $a = 0.210562 + 1.129790I$ $b = 0.517869 + 0.633031I$	$-2.32367 + 1.28895I$	0
$u = 0.598126 + 0.749447I$ $a = -0.018088 + 0.669995I$ $b = -1.243940 + 0.671685I$	$6.43884 - 1.85606I$	0
$u = 0.598126 - 0.749447I$ $a = -0.018088 - 0.669995I$ $b = -1.243940 - 0.671685I$	$6.43884 + 1.85606I$	0
$u = -0.856928 + 0.415771I$ $a = 0.88931 + 1.26976I$ $b = 1.93123 + 1.58580I$	$-1.65691 - 0.86452I$	0
$u = -0.856928 - 0.415771I$ $a = 0.88931 - 1.26976I$ $b = 1.93123 - 1.58580I$	$-1.65691 + 0.86452I$	0
$u = -0.806252 + 0.506145I$ $a = -0.87444 - 1.57282I$ $b = -1.56031 - 0.99865I$	$1.74273 + 2.08497I$	0
$u = -0.806252 - 0.506145I$ $a = -0.87444 + 1.57282I$ $b = -1.56031 + 0.99865I$	$1.74273 - 2.08497I$	0
$u = 0.535100 + 0.785517I$ $a = 1.47924 - 0.88491I$ $b = 1.36629 + 0.50675I$	$-1.01099 + 5.78248I$	0
$u = 0.535100 - 0.785517I$ $a = 1.47924 + 0.88491I$ $b = 1.36629 - 0.50675I$	$-1.01099 - 5.78248I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.626179+0.843667I$ $a=\ 0.169285+0.779136I$ $b=\ 0.946759+0.496073I$	$7.45083-0.28837I$	0
$u=-0.626179-0.843667I$ $a=\ 0.169285-0.779136I$ $b=\ 0.946759-0.496073I$	$7.45083+0.28837I$	0
$u=-0.948712+0.454402I$ $a=\ 1.40790+1.16283I$ $b=\ 1.021270+0.497104I$	$-2.04324+4.34407I$	0
$u=-0.948712-0.454402I$ $a=\ 1.40790-1.16283I$ $b=\ 1.021270-0.497104I$	$-2.04324-4.34407I$	0
$u=-0.931616+0.500567I$ $a=-1.22621-1.87235I$ $b=-2.01752-0.73224I$	$1.46381+1.84510I$	0
$u=-0.931616-0.500567I$ $a=-1.22621+1.87235I$ $b=-2.01752+0.73224I$	$1.46381-1.84510I$	0
$u=-0.776028+0.723624I$ $a=-0.916415-0.514421I$ $b=-1.273670-0.057649I$	$2.88771+1.95925I$	0
$u=-0.776028-0.723624I$ $a=-0.916415+0.514421I$ $b=-1.273670+0.057649I$	$2.88771-1.95925I$	0
$u=\ 0.755572+0.545167I$ $a=\ 1.68045-2.03588I$ $b=\ 1.061500-0.844023I$	$2.75731+5.54693I$	0
$u=\ 0.755572-0.545167I$ $a=\ 1.68045+2.03588I$ $b=\ 1.061500+0.844023I$	$2.75731-5.54693I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$0.759372+0.531679I$		
$a=$	$0.43982-1.78428I$	$3.59006-2.57418I$	0
$b=$	$0.003159-0.785364I$		
$u=$	$0.759372-0.531679I$		
$a=$	$0.43982+1.78428I$	$3.59006+2.57418I$	0
$b=$	$0.003159+0.785364I$		
$u=$	$0.921773+0.554518I$		
$a=$	$0.847379+0.063602I$	$3.05691-1.82766I$	0
$b=$	$1.72736-0.21624I$		
$u=$	$0.921773-0.554518I$		
$a=$	$0.847379-0.063602I$	$3.05691+1.82766I$	0
$b=$	$1.72736+0.21624I$		
$u=$	$-0.482878+0.961506I$		
$a=$	$-1.143840-0.828686I$	$2.4349-14.4432I$	0
$b=$	$-1.083810+0.554385I$		
$u=$	$-0.482878-0.961506I$		
$a=$	$-1.143840+0.828686I$	$2.4349+14.4432I$	0
$b=$	$-1.083810-0.554385I$		
$u=$	$0.929044+0.546307I$		
$a=$	$-0.889605+0.899784I$	$-0.67270-5.34745I$	0
$b=$	$-2.00277+1.23026I$		
$u=$	$0.929044-0.546307I$		
$a=$	$-0.889605-0.899784I$	$-0.67270+5.34745I$	0
$b=$	$-2.00277-1.23026I$		
$u=$	$0.929136+0.547891I$		
$a=$	$1.52833-0.96048I$	$2.19729-9.95091I$	0
$b=$	$2.69093-1.18841I$		
$u=$	$0.929136-0.547891I$		
$a=$	$1.52833+0.96048I$	$2.19729+9.95091I$	0
$b=$	$2.69093+1.18841I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.004960+0.399803I$ $a=-1.40868-0.88746I$ $b=-1.099750-0.855542I$	$0.88846+8.43462I$	0
$u=-1.004960-0.399803I$ $a=-1.40868+0.88746I$ $b=-1.099750+0.855542I$	$0.88846-8.43462I$	0
$u=\ \ 0.738735+0.536581I$ $a=-1.33873+1.44316I$ $b=-0.690771+0.374518I$	$-0.072951+0.961480I$	0
$u=\ \ 0.738735-0.536581I$ $a=-1.33873-1.44316I$ $b=-0.690771-0.374518I$	$-0.072951-0.961480I$	0
$u=-0.854118+0.679305I$ $a=-0.15786+1.91806I$ $b=\ \ 0.62577+1.61923I$	$4.81237-0.44211I$	0
$u=-0.854118-0.679305I$ $a=-0.15786-1.91806I$ $b=\ \ 0.62577-1.61923I$	$4.81237+0.44211I$	0
$u=-0.466443+0.987944I$ $a=\ \ 0.991951+0.705897I$ $b=\ \ 0.932721-0.503111I$	$-0.60239-8.18752I$	0
$u=-0.466443-0.987944I$ $a=\ \ 0.991951-0.705897I$ $b=\ \ 0.932721+0.503111I$	$-0.60239+8.18752I$	0
$u=\ \ 0.957099+0.540908I$ $a=\ \ 0.14141+1.66823I$ $b=-0.99477+2.04946I$	$-3.01144-4.92489I$	0
$u=\ \ 0.957099-0.540908I$ $a=\ \ 0.14141-1.66823I$ $b=-0.99477-2.04946I$	$-3.01144+4.92489I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.108390+0.036148I$ $a=\ \ 0.412788+0.414387I$ $b=-0.813571+0.037760I$	$-6.57571-4.32904I$	0
$u=-1.108390-0.036148I$ $a=\ \ 0.412788-0.414387I$ $b=-0.813571-0.037760I$	$-6.57571+4.32904I$	0
$u=\ \ 0.721883+0.511371I$ $a=-1.76456+0.10147I$ $b=-0.49151-1.64811I$	$0.30418-2.77851I$	0
$u=\ \ 0.721883-0.511371I$ $a=-1.76456-0.10147I$ $b=-0.49151+1.64811I$	$0.30418+2.77851I$	0
$u=\ \ 0.995347+0.504511I$ $a=-0.32124-1.51056I$ $b=\ \ 0.50761-1.70473I$	$-3.11466-1.07906I$	0
$u=\ \ 0.995347-0.504511I$ $a=-0.32124+1.51056I$ $b=\ \ 0.50761+1.70473I$	$-3.11466+1.07906I$	0
$u=-0.868062+0.709058I$ $a=\ \ 1.57283-0.12343I$ $b=\ \ 1.63720-0.80832I$	$4.78608+5.78377I$	0
$u=-0.868062-0.709058I$ $a=\ \ 1.57283+0.12343I$ $b=\ \ 1.63720+0.80832I$	$4.78608-5.78377I$	0
$u=-0.870669+0.080722I$ $a=\ \ 1.24479+1.41373I$ $b=\ \ 0.680066+0.603111I$	$-2.39934-2.95807I$	0
$u=-0.870669-0.080722I$ $a=\ \ 1.24479-1.41373I$ $b=\ \ 0.680066-0.603111I$	$-2.39934+2.95807I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.115030+0.177294I$ $a=-0.216775+0.957878I$ $b=-1.30923+0.81369I$	$-5.24468+0.22869I$	0
$u=-1.115030-0.177294I$ $a=-0.216775-0.957878I$ $b=-1.30923-0.81369I$	$-5.24468-0.22869I$	0
$u=0.420181+0.759965I$ $a=-1.63220+1.14348I$ $b=-1.003700-0.159361I$	$-0.65932+4.36442I$	0
$u=0.420181-0.759965I$ $a=-1.63220-1.14348I$ $b=-1.003700+0.159361I$	$-0.65932-4.36442I$	0
$u=-0.816509+0.287001I$ $a=-1.18022-1.97542I$ $b=-1.58080-0.88820I$	$2.11286+1.69342I$	0
$u=-0.816509-0.287001I$ $a=-1.18022+1.97542I$ $b=-1.58080+0.88820I$	$2.11286-1.69342I$	0
$u=-0.819864+0.266572I$ $a=-0.62318-1.90819I$ $b=-0.80637-1.78729I$	$1.51246+2.50065I$	0
$u=-0.819864-0.266572I$ $a=-0.62318+1.90819I$ $b=-0.80637+1.78729I$	$1.51246-2.50065I$	0
$u=0.180802+0.842553I$ $a=-0.366372-0.969411I$ $b=0.082429-0.379043I$	$4.48198-5.22354I$	0
$u=0.180802-0.842553I$ $a=-0.366372+0.969411I$ $b=0.082429+0.379043I$	$4.48198+5.22354I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.929349+0.664804I$ $a=-0.41692-1.36478I$ $b=-0.946883-0.937696I$	$2.39145+3.35955I$	0
$u=-0.929349-0.664804I$ $a=-0.41692+1.36478I$ $b=-0.946883+0.937696I$	$2.39145-3.35955I$	0
$u=\ \ 0.480582+0.701769I$ $a=\ \ 1.74886-0.70670I$ $b=\ \ 1.164280+0.135179I$	$-0.60338+1.74935I$	0
$u=\ \ 0.480582-0.701769I$ $a=\ \ 1.74886+0.70670I$ $b=\ \ 1.164280-0.135179I$	$-0.60338-1.74935I$	0
$u=-1.164650+0.035527I$ $a=-0.160183-0.210952I$ $b=\ \ 1.083000-0.050934I$	$-7.78473-0.46269I$	0
$u=-1.164650-0.035527I$ $a=-0.160183+0.210952I$ $b=\ \ 1.083000+0.050934I$	$-7.78473+0.46269I$	0
$u=\ \ 0.565026+0.614392I$ $a=-1.41951+0.26683I$ $b=-0.541770-0.787177I$	$-1.95528+0.40890I$	0
$u=\ \ 0.565026-0.614392I$ $a=-1.41951-0.26683I$ $b=-0.541770+0.787177I$	$-1.95528-0.40890I$	0
$u=-0.839944+0.814312I$ $a=-1.04023+1.00033I$ $b=-0.35402+1.38938I$	$3.86284+5.61334I$	0
$u=-0.839944-0.814312I$ $a=-1.04023-1.00033I$ $b=-0.35402-1.38938I$	$3.86284-5.61334I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.827198+0.026035I$ $a=-1.73308+1.15402I$ $b=-0.880693+0.160135I$	$1.05929+7.91977I$	0
$u=-0.827198-0.026035I$ $a=-1.73308-1.15402I$ $b=-0.880693-0.160135I$	$1.05929-7.91977I$	0
$u=1.147450+0.253250I$ $a=-0.613798-0.129454I$ $b=0.468990-0.718982I$	$-3.98129+4.28687I$	0
$u=1.147450-0.253250I$ $a=-0.613798+0.129454I$ $b=0.468990+0.718982I$	$-3.98129-4.28687I$	0
$u=-1.177650+0.191619I$ $a=0.510995-0.627460I$ $b=1.66796-0.37807I$	$-5.59671-1.86006I$	0
$u=-1.177650-0.191619I$ $a=0.510995+0.627460I$ $b=1.66796+0.37807I$	$-5.59671+1.86006I$	0
$u=0.764996+0.251400I$ $a=-1.38964+0.30977I$ $b=-0.432945-1.081040I$	$0.32979-2.90045I$	0
$u=0.764996-0.251400I$ $a=-1.38964-0.30977I$ $b=-0.432945+1.081040I$	$0.32979+2.90045I$	0
$u=1.024040+0.634235I$ $a=-0.959462+0.990982I$ $b=-1.003000-0.039725I$	$5.14885-3.40949I$	0
$u=1.024040-0.634235I$ $a=-0.959462-0.990982I$ $b=-1.003000+0.039725I$	$5.14885+3.40949I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.029250 + 0.643230I$ $a = 0.80365 - 1.38739I$ $b = 1.218130 - 0.615126I$	$1.22303 - 8.49093I$	0
$u = 1.029250 - 0.643230I$ $a = 0.80365 + 1.38739I$ $b = 1.218130 + 0.615126I$	$1.22303 + 8.49093I$	0
$u = 1.028570 + 0.651156I$ $a = -1.02382 + 1.55998I$ $b = -1.70686 + 0.58162I$	$5.1235 - 13.3621I$	0
$u = 1.028570 - 0.651156I$ $a = -1.02382 - 1.55998I$ $b = -1.70686 - 0.58162I$	$5.1235 + 13.3621I$	0
$u = -1.091420 + 0.539497I$ $a = -0.28059 - 1.70796I$ $b = -1.63451 - 1.64993I$	$-2.11757 + 11.83540I$	0
$u = -1.091420 - 0.539497I$ $a = -0.28059 + 1.70796I$ $b = -1.63451 + 1.64993I$	$-2.11757 - 11.83540I$	0
$u = -0.917005 + 0.804673I$ $a = 1.010330 - 0.929796I$ $b = 0.51265 - 1.47019I$	$3.63889 + 0.42575I$	0
$u = -0.917005 - 0.804673I$ $a = 1.010330 + 0.929796I$ $b = 0.51265 + 1.47019I$	$3.63889 - 0.42575I$	0
$u = 1.218830 + 0.177949I$ $a = 0.067118 + 0.324108I$ $b = 0.385715 + 0.041239I$	$0.226309 + 0.633517I$	0
$u = 1.218830 - 0.177949I$ $a = 0.067118 - 0.324108I$ $b = 0.385715 - 0.041239I$	$0.226309 - 0.633517I$	0

	Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=$	$1.070190+0.612135I$		
$a=$	$0.49053-1.87768I$	$-2.32132-6.84418I$	0
$b=$	$1.23698-2.13388I$		
$u=$	$1.070190-0.612135I$		
$a=$	$0.49053+1.87768I$	$-2.32132+6.84418I$	0
$b=$	$1.23698+2.13388I$		
$u=$	$-1.132180+0.490877I$		
$a=$	$0.47531+1.42514I$	$-5.42116+5.68279I$	0
$b=$	$1.52760+1.36159I$		
$u=$	$-1.132180-0.490877I$		
$a=$	$0.47531-1.42514I$	$-5.42116-5.68279I$	0
$b=$	$1.52760-1.36159I$		
$u=$	$0.424472+0.630167I$		
$a=$	$1.264210+0.070425I$	$-1.49570-3.25862I$	0
$b=$	$0.367634+0.939807I$		
$u=$	$0.424472-0.630167I$		
$a=$	$1.264210-0.070425I$	$-1.49570+3.25862I$	0
$b=$	$0.367634-0.939807I$		
$u=$	$-1.025350+0.707689I$		
$a=$	$0.677942+0.799775I$	$6.24337+6.04898I$	0
$b=$	$1.048920+0.212449I$		
$u=$	$-1.025350-0.707689I$		
$a=$	$0.677942-0.799775I$	$6.24337-6.04898I$	0
$b=$	$1.048920-0.212449I$		
$u=$	$1.066110+0.651740I$		
$a=$	$0.41384-1.95072I$	$-2.59362-11.21460I$	0
$b=$	$1.60420-1.96785I$		
$u=$	$1.066110-0.651740I$		
$a=$	$0.41384+1.95072I$	$-2.59362+11.21460I$	0
$b=$	$1.60420+1.96785I$		

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.192490 + 0.390793I$ $a = 0.532537 - 0.056332I$ $b = -0.302094 + 0.512997I$	$-6.11510 - 2.58441I$	0
$u = 1.192490 - 0.390793I$ $a = 0.532537 + 0.056332I$ $b = -0.302094 - 0.512997I$	$-6.11510 + 2.58441I$	0
$u = 1.100880 + 0.614737I$ $a = -0.65268 + 1.76302I$ $b = -1.61299 + 2.12858I$	$-2.63993 - 9.58677I$	0
$u = 1.100880 - 0.614737I$ $a = -0.65268 - 1.76302I$ $b = -1.61299 - 2.12858I$	$-2.63993 + 9.58677I$	0
$u = 1.080170 + 0.658860I$ $a = -0.24720 + 1.76595I$ $b = -1.38659 + 2.02779I$	$-3.67748 - 7.74776I$	0
$u = 1.080170 - 0.658860I$ $a = -0.24720 - 1.76595I$ $b = -1.38659 - 2.02779I$	$-3.67748 + 7.74776I$	0
$u = -0.564923 + 1.132750I$ $a = -0.377231 + 0.097445I$ $b = 0.198090 + 0.716380I$	$2.82627 + 8.42490I$	0
$u = -0.564923 - 1.132750I$ $a = -0.377231 - 0.097445I$ $b = 0.198090 - 0.716380I$	$2.82627 - 8.42490I$	0
$u = 0.716452$ $a = -0.739915$ $b = -0.0113025$	-1.05941	0
$u = -0.243634 + 0.667902I$ $a = -0.61222 - 1.28468I$ $b = -0.905922 + 0.675723I$	$0.17996 - 7.25422I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.243634-0.667902I$ $a=-0.61222+1.28468I$ $b=-0.905922-0.675723I$	$0.17996+7.25422I$	0
$u=-0.040825+0.704009I$ $a=\ \ 0.114844+0.992827I$ $b=\ \ 0.650652-0.535962I$	$-2.47839-1.40237I$	0
$u=-0.040825-0.704009I$ $a=\ \ 0.114844-0.992827I$ $b=\ \ 0.650652+0.535962I$	$-2.47839+1.40237I$	0
$u=\ \ 1.327210+0.023860I$ $a=-0.113392-0.264341I$ $b=\ \ 0.904697-0.004573I$	$-4.48461-11.69480I$	0
$u=\ \ 1.327210-0.023860I$ $a=-0.113392+0.264341I$ $b=\ \ 0.904697+0.004573I$	$-4.48461+11.69480I$	0
$u=-1.160740+0.652238I$ $a=-0.65404-1.30000I$ $b=-1.57987-1.24239I$	$3.62290+9.62772I$	0
$u=-1.160740-0.652238I$ $a=-0.65404+1.30000I$ $b=-1.57987+1.24239I$	$3.62290-9.62772I$	0
$u=-1.145850+0.689720I$ $a=-0.47231-1.65766I$ $b=-1.65445-1.81121I$	$0.3877+20.4613I$	0
$u=-1.145850-0.689720I$ $a=-0.47231+1.65766I$ $b=-1.65445+1.81121I$	$0.3877-20.4613I$	0
$u=\ \ 1.175850+0.645521I$ $a=\ \ 0.708944-1.012540I$ $b=\ \ 1.73251-1.20007I$	$2.15984-10.81450I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.175850 - 0.645521I$ $a = 0.708944 + 1.012540I$ $b = 1.73251 + 1.20007I$	$2.15984 + 10.81450I$	0
$u = -1.158810 + 0.690934I$ $a = 0.42334 + 1.51025I$ $b = 1.48647 + 1.66305I$	$-2.7476 + 14.2724I$	0
$u = -1.158810 - 0.690934I$ $a = 0.42334 - 1.51025I$ $b = 1.48647 - 1.66305I$	$-2.7476 - 14.2724I$	0
$u = 1.141290 + 0.726387I$ $a = -0.135706 + 1.023370I$ $b = -1.05423 + 1.36797I$	$-2.38535 - 6.87236I$	0
$u = 1.141290 - 0.726387I$ $a = -0.135706 - 1.023370I$ $b = -1.05423 - 1.36797I$	$-2.38535 + 6.87236I$	0
$u = 0.288712 + 1.331530I$ $a = -0.130366 + 0.393722I$ $b = -0.061495 - 0.339967I$	$-0.266346 + 0.160518I$	0
$u = 0.288712 - 1.331530I$ $a = -0.130366 - 0.393722I$ $b = -0.061495 + 0.339967I$	$-0.266346 - 0.160518I$	0
$u = -1.258470 + 0.526294I$ $a = 0.583072 + 0.864035I$ $b = 1.25172 + 0.96195I$	$-4.54006 + 5.50754I$	0
$u = -1.258470 - 0.526294I$ $a = 0.583072 - 0.864035I$ $b = 1.25172 - 0.96195I$	$-4.54006 - 5.50754I$	0
$u = -1.295630 + 0.427334I$ $a = -0.537962 - 0.468614I$ $b = -1.186700 - 0.759780I$	$-0.554881 - 1.025030I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.295630-0.427334I$ $a=-0.537962+0.468614I$ $b=-1.186700+0.759780I$	$-0.554881+1.025030I$	0
$u=1.373850+0.038120I$ $a=0.130239+0.191716I$ $b=-0.777324+0.061404I$	$-7.70464-5.14143I$	0
$u=1.373850-0.038120I$ $a=0.130239-0.191716I$ $b=-0.777324-0.061404I$	$-7.70464+5.14143I$	0
$u=0.417611+0.202193I$ $a=1.29355-1.02443I$ $b=0.653913+0.910609I$	$-0.663690-0.744854I$	$-4.45232-4.17233I$
$u=0.417611-0.202193I$ $a=1.29355+1.02443I$ $b=0.653913-0.910609I$	$-0.663690+0.744854I$	$-4.45232+4.17233I$
$u=-0.024338+0.452523I$ $a=-0.171959+0.548405I$ $b=0.458512+0.566102I$	$-0.03010-1.50384I$	$-0.88120+3.70129I$
$u=-0.024338-0.452523I$ $a=-0.171959-0.548405I$ $b=0.458512-0.566102I$	$-0.03010+1.50384I$	$-0.88120-3.70129I$
$u=-0.131380+0.186264I$ $a=1.04956-3.71809I$ $b=-0.856944-0.185472I$	$2.49958+1.42807I$	$-0.811241+0.219630I$
$u=-0.131380-0.186264I$ $a=1.04956+3.71809I$ $b=-0.856944+0.185472I$	$2.49958-1.42807I$	$-0.811241-0.219630I$
$u=1.85426$ $a=0.0886439$ $b=0.585950$	0.130363	0

II. $\boldsymbol{I_2^u = \langle 2.13\times 10^8 u^{30} - 9.96\times 10^8 u^{29} + \cdots + 1.36\times 10^8 b + 1.21\times 10^9,\ 4.20\times 10^9 u^{30} - 2.96\times 10^9 u^{29} + \cdots + 1.36\times 10^8 a + 2.78\times 10^9,\ 3u^{31} - 4u^{30} + \cdots + 6u - 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -30.8872u^{30} + 21.7685u^{29} + \cdots + 74.4405u - 20.4556 \\ -1.56405u^{30} + 7.32326u^{29} + \cdots + 30.3148u - 8.86565 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 43.7045u^{30} - 58.2812u^{29} + \cdots - 179.656u + 44.2673 \\ 3.84825u^{30} - 11.8106u^{29} + \cdots - 61.8249u + 14.4835 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -16.0469u^{30} + 7.31402u^{29} + \cdots + 31.1831u - 9.23022 \\ 14.0442u^{30} - 4.01176u^{29} + \cdots + 6.18965u - 3.90038 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -13.9138u^{30} + 5.46081u^{29} + \cdots + 34.9102u - 12.2382 \\ 15.4094u^{30} - 8.98443u^{29} + \cdots - 9.21545u - 0.648204 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -17.0103u^{30} - 0.714734u^{29} + \cdots - 17.8085u + 10.4871 \\ -23.0103u^{30} + 7.28527u^{29} + \cdots - 9.80851u + 5.48705 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -44.2455u^{30} + 48.4813u^{29} + \cdots + 139.478u - 33.4925 \\ -24.8948u^{30} + 42.2026u^{29} + \cdots + 69.5231u - 18.4446 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -16.7776u^{30} + 33.8325u^{29} + \cdots + 97.0449u - 27.2767 \\ 13.4658u^{30} + 13.5097u^{29} + \cdots - 16.2875u - 1.12312 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{736852959}{135981283}u^{30} - \frac{1582353156}{135981283}u^{29} + \cdots - \frac{22773455801}{135981283}u + \frac{6148724960}{135981283}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$9(9u^{31}-148u^{30}+\cdots+20u-1)$
c_2	$3(3u^{31}-4u^{30}+\cdots+6u-1)$
c_3	$u^{31}-u^{30}+\cdots+85u-27$
c_4	$u^{31}+17u^{29}+\cdots-6u-1$
c_5	$u^{31}+u^{30}+\cdots+u-1$
c_6	$3(3u^{31}+4u^{30}+\cdots+6u+1)$
c_7	$u^{31}+u^{30}+\cdots+13u+3$
c_8	$3(3u^{31}-8u^{30}+\cdots-6u+1)$
c_9	$u^{31}-u^{30}+\cdots+u+1$
c_{10}	$u^{31}-11u^{30}+\cdots+13u+9$
c_{11}	$3(3u^{31}+8u^{30}+\cdots-6u-1)$
c_{12}	$9(9u^{31}-22u^{30}+\cdots-u-1)$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$81(81y^{31}+524y^{30}+\cdots-36y-1)$
c_2, c_6	$9(9y^{31}-148y^{30}+\cdots+20y-1)$
c_3	$y^{31}-y^{30}+\cdots-173y-729$
c_4	$y^{31}+34y^{30}+\cdots-14y-1$
c_5, c_9	$y^{31}+5y^{30}+\cdots-11y-1$
c_7	$y^{31}-5y^{30}+\cdots-935y-9$
c_8, c_{11}	$9(9y^{31}-130y^{30}+\cdots+24y-1)$
c_{10}	$y^{31}-21y^{30}+\cdots-173y-81$
c_{12}	$81(81y^{31}+38y^{30}+\cdots+31y-1)$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.858612+0.515138I$ $a=-1.37622-4.01780I$ $b=-4.20794-1.18847I$	$-0.23644+2.08753I$	$-76.5388-18.7559I$
$u=-0.858612-0.515138I$ $a=-1.37622+4.01780I$ $b=-4.20794+1.18847I$	$-0.23644-2.08753I$	$-76.5388+18.7559I$
$u=-0.554897+0.800779I$ $a=-1.178170-0.395757I$ $b=-0.418130+0.174521I$	$3.01864+7.43696I$	$-1.21621-5.74687I$
$u=-0.554897-0.800779I$ $a=-1.178170+0.395757I$ $b=-0.418130-0.174521I$	$3.01864-7.43696I$	$-1.21621+5.74687I$
$u=0.524538+0.745772I$ $a=-1.74125+0.86471I$ $b=-1.245180-0.325526I$	$-1.13995+3.19665I$	$-3.05506-3.13305I$
$u=0.524538-0.745772I$ $a=-1.74125-0.86471I$ $b=-1.245180+0.325526I$	$-1.13995-3.19665I$	$-3.05506+3.13305I$
$u=-1.099630+0.179505I$ $a=0.387377-0.823642I$ $b=1.59666-0.53206I$	$-6.01219-1.53308I$	$-14.08137-0.67990I$
$u=-1.099630-0.179505I$ $a=0.387377+0.823642I$ $b=1.59666+0.53206I$	$-6.01219+1.53308I$	$-14.08137+0.67990I$
$u=-0.864052+0.726910I$ $a=-0.636623+0.903961I$ $b=-0.385938+0.741971I$	$4.90331+0.89421I$	$4.08447-2.70213I$
$u=-0.864052-0.726910I$ $a=-0.636623-0.903961I$ $b=-0.385938-0.741971I$	$4.90331-0.89421I$	$4.08447+2.70213I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.849906+0.058760I$ $a=\ \ 0.825237-1.071510I$ $b=-0.86381-1.18230I$	$-4.45902-1.94666I$	$-9.14800+3.18189I$
$u=-0.849906-0.058760I$ $a=\ \ 0.825237+1.071510I$ $b=-0.86381+1.18230I$	$-4.45902+1.94666I$	$-9.14800-3.18189I$
$u=-0.892665+0.731929I$ $a=\ \ 0.682175-0.625465I$ $b=\ \ 0.727682-0.893517I$	$4.81517+4.66893I$	$2.13436-1.39007I$
$u=-0.892665-0.731929I$ $a=\ \ 0.682175+0.625465I$ $b=\ \ 0.727682+0.893517I$	$4.81517-4.66893I$	$2.13436+1.39007I$
$u=\ \ 0.795550+0.274980I$ $a=\ \ 1.00612-2.25927I$ $b=\ \ 1.00091-1.35849I$	$2.03796-2.20994I$	$2.04278+6.67851I$
$u=\ \ 0.795550-0.274980I$ $a=\ \ 1.00612+2.25927I$ $b=\ \ 1.00091+1.35849I$	$2.03796+2.20994I$	$2.04278-6.67851I$
$u=-1.158700+0.301087I$ $a=-0.588705+0.169521I$ $b=\ \ 0.439569+0.612785I$	$-6.27566+3.15936I$	$-11.05139-7.17760I$
$u=-1.158700-0.301087I$ $a=-0.588705-0.169521I$ $b=\ \ 0.439569-0.612785I$	$-6.27566-3.15936I$	$-11.05139+7.17760I$
$u=\ \ 1.20116$ $a=\ \ 0.321074$ $b=\ \ 0.751310$	0.450002	2.31810
$u=\ \ 0.695611+0.357787I$ $a=-0.819311+0.319295I$ $b=-0.471929-0.895995I$	$-0.73116-1.41552I$	$-5.92527+6.15050I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.695611 - 0.357787I$ $a = -0.819311 - 0.319295I$ $b = -0.471929 + 0.895995I$	$-0.73116 + 1.41552I$	$-5.92527 - 6.15050I$
$u = 1.089780 + 0.545947I$ $a = 1.11925 - 1.38851I$ $b = 2.14114 - 1.43848I$	$0.34359 - 10.66130I$	$-4.96669 + 10.12693I$
$u = 1.089780 - 0.545947I$ $a = 1.11925 + 1.38851I$ $b = 2.14114 + 1.43848I$	$0.34359 + 10.66130I$	$-4.96669 - 10.12693I$
$u = 1.068000 + 0.637758I$ $a = -0.45706 + 1.91267I$ $b = -1.47558 + 2.18983I$	$-2.74890 - 8.49382I$	$-4.24564 + 6.65481I$
$u = 1.068000 - 0.637758I$ $a = -0.45706 - 1.91267I$ $b = -1.47558 - 2.18983I$	$-2.74890 + 8.49382I$	$-4.24564 - 6.65481I$
$u = 0.590911 + 0.445205I$ $a = 2.07403 - 2.32551I$ $b = 1.48160 - 0.99440I$	$2.11537 + 6.43570I$	$-1.77775 - 7.83697I$
$u = 0.590911 - 0.445205I$ $a = 2.07403 + 2.32551I$ $b = 1.48160 + 0.99440I$	$2.11537 - 6.43570I$	$-1.77775 + 7.83697I$
$u = 1.217690 + 0.497443I$ $a = -0.692808 + 0.996597I$ $b = -1.47488 + 1.01538I$	$-4.62923 - 5.90799I$	$-5.7245 + 15.1795I$
$u = 1.217690 - 0.497443I$ $a = -0.692808 - 0.996597I$ $b = -1.47488 - 1.01538I$	$-4.62923 + 5.90799I$	$-5.7245 - 15.1795I$
$u = 0.362483 + 0.194933I$ $a = -2.26457 + 2.15975I$ $b = -0.719818 + 0.877202I$	$-1.09611 + 2.27545I$	$-6.14727 - 4.74459I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.362483 - 0.194933I$		
$a = -2.26457 - 2.15975I$	$-1.09611 - 2.27545I$	$-6.14727 + 4.74459I$
$b = -0.719818 - 0.877202I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$81(9u^{31}-148u^{30}+\cdots+20u-1)$ $\cdot(9u^{160}+625u^{159}+\cdots+662313u+37249)$
c_2	$9(3u^{31}-4u^{30}+\cdots+6u-1)(3u^{160}+u^{159}+\cdots-331u+193)$
c_3	$(u^{31}-u^{30}+\cdots+85u-27)(u^{160}+2u^{159}+\cdots+138410u+38043)$
c_4	$(u^{31}+17u^{29}+\cdots-6u-1)(u^{160}-3u^{159}+\cdots+8419865u-580297)$
c_5	$(u^{31}+u^{30}+\cdots+u-1)(u^{160}-4u^{159}+\cdots+5365970u+823609)$
c_6	$9(3u^{31}+4u^{30}+\cdots+6u+1)(3u^{160}+u^{159}+\cdots-331u+193)$
c_7	$(u^{31}+u^{30}+\cdots+13u+3)$ $\cdot(u^{160}-10u^{159}+\cdots-10677820u+828069)$
c_8	$9(3u^{31}-8u^{30}+\cdots-6u+1)(3u^{160}+7u^{159}+\cdots+27391u+4289)$
c_9	$(u^{31}-u^{30}+\cdots+u+1)(u^{160}-4u^{159}+\cdots+5365970u+823609)$
c_{10}	$(u^{31}-11u^{30}+\cdots+13u+9)$ $\cdot(u^{160}-6u^{159}+\cdots-13655574u+592191)$
c_{11}	$9(3u^{31}+8u^{30}+\cdots-6u-1)(3u^{160}+7u^{159}+\cdots+27391u+4289)$
c_{12}	$81(9u^{31}-22u^{30}+\cdots-u-1)(9u^{160}+139u^{159}+\cdots+7244u+959)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$6561(81y^{31}+524y^{30}+\cdots-36y-1)$ $\cdot(81y^{160}+2819y^{159}+\cdots+777368917123y+1387488001)$
c_2, c_6	$81(9y^{31}-148y^{30}+\cdots+20y-1)$ $\cdot(9y^{160}-625y^{159}+\cdots-662313y+37249)$
c_3	$(y^{31}-y^{30}+\cdots-173y-729)$ $\cdot(y^{160}-10y^{159}+\cdots+181994273540y+1447269849)$
c_4	$(y^{31}+34y^{30}+\cdots-14y-1)$ $\cdot(y^{160}-7y^{159}+\cdots-29142125376523y+336744608209)$
c_5, c_9	$(y^{31}+5y^{30}+\cdots-11y-1)$ $\cdot(y^{160}-76y^{159}+\cdots-6823756896730y+678331784881)$
c_7	$(y^{31}-5y^{30}+\cdots-935y-9)$ $\cdot(y^{160}+22y^{159}+\cdots+33389274231554y+685698268761)$
c_8, c_{11}	$81(9y^{31}-130y^{30}+\cdots+24y-1)$ $\cdot(9y^{160}-787y^{159}+\cdots-587147633y+18395521)$
c_{10}	$(y^{31}-21y^{30}+\cdots-173y-81)$ $\cdot(y^{160}+6y^{159}+\cdots+12702120885144y+350690180481)$
c_{12}	$6561(81y^{31}+38y^{30}+\cdots+31y-1)$ $\cdot(81y^{160}-583y^{159}+\cdots-11587612y+919681)$