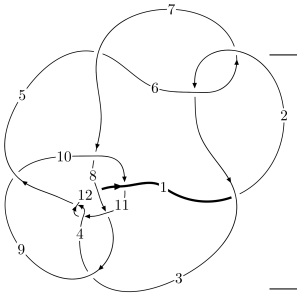
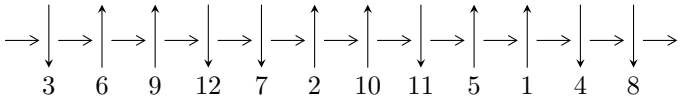
$12a_{0415}$ $(K12a_{0415})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -7.22695 \times 10^{232} u^{156} - 2.83942 \times 10^{233} u^{155} + \cdots + 7.03858 \times 10^{232} b - 6.42788 \times 10^{232},$$
$$- 2.77552 \times 10^{233} u^{156} - 1.00711 \times 10^{234} u^{155} + \cdots + 7.03858 \times 10^{232} a - 8.46264 \times 10^{233},$$
$$u^{157} + 3u^{156} + \cdots + 20u - 1 \rangle$$
$$I_2^u = \langle 6u^{32} - 8u^{31} + \cdots + b + 3,\ u^{31} - 4u^{30} + \cdots + a + 1,\ u^{33} - 2u^{32} + \cdots - 2u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 190 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. $\boldsymbol{I_1^u = \langle -7.23 \times 10^{232} u^{156} - 2.84 \times 10^{233} u^{155} + \cdots + 7.04 \times 10^{232} b - 6.43 \times 10^{232},\ -2.78 \times 10^{233} u^{156} - 1.01 \times 10^{234} u^{155} + \cdots + 7.04 \times 10^{232} a - 8.46 \times 10^{233},\ u^{157} + 3u^{156} + \cdots + 20u - 1 \rangle}$

(i) Arc colorings

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

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

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

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

$$a_{10} = \begin{pmatrix} 3.94330u^{156} + 14.3084u^{155} + \cdots - 215.833u + 12.0232 \\ 1.02676u^{156} + 4.03408u^{155} + \cdots + 7.45787u + 0.913236 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -4.91003u^{156} - 11.8337u^{155} + \cdots + 405.512u - 35.1552 \\ -0.0408320u^{156} + 1.65797u^{155} + \cdots + 25.4097u - 1.67370 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} 3.72168u^{156} + 14.4412u^{155} + \cdots - 240.641u + 14.6185 \\ -0.0679406u^{156} + 0.144116u^{155} + \cdots - 22.1587u + 2.44123 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} 3.94427u^{156} + 15.7459u^{155} + \cdots - 194.196u + 10.9237 \\ 0.675606u^{156} + 3.31577u^{155} + \cdots - 6.23214u + 1.75659 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.865828u^{156} + 3.51473u^{155} + \cdots + 134.531u - 19.8156 \\ 1.78361u^{156} + 6.57450u^{155} + \cdots - 9.63089u + 0.852523 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -1.38787u^{156} - 3.84467u^{155} + \cdots + 22.3222u + 11.7347 \\ 0.0715685u^{156} + 2.04385u^{155} + \cdots + 73.2958u - 4.75087 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -7.48606u^{156} - 19.1787u^{155} + \cdots + 332.793u - 21.7130$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{157} + 49u^{156} + \cdots + 66u - 1$
c_2, c_6	$u^{157} - 3u^{156} + \cdots + 20u + 1$
c_3	$u^{157} + u^{156} + \cdots + 15730067u + 2315629$
c_4, c_{11}	$u^{157} + u^{156} + \cdots + 427u + 286$
c_7	$u^{157} - 6u^{156} + \cdots - 586611u - 71082$
c_8	$u^{157} + 7u^{156} + \cdots - 141270u - 7225$
c_9	$u^{157} + u^{156} + \cdots - 1890458u - 514883$
c_{10}	$u^{157} + 16u^{156} + \cdots + 71u + 1$
c_{12}	$u^{157} + 8u^{156} + \cdots - 61u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{157} + 125y^{156} + \cdots - 3938y - 1$
c_2, c_6	$y^{157} + 49y^{156} + \cdots + 66y - 1$
c_3	$y^{157} + 17y^{156} + \cdots - 194381535859813y - 5362137665641$
c_4, c_{11}	$y^{157} - 93y^{156} + \cdots + 2756329y - 81796$
c_7	$y^{157} - 34y^{156} + \cdots - 162359863767y - 5052650724$
c_8	$y^{157} - 29y^{156} + \cdots + 11092528050y - 52200625$
c_9	$y^{157} - 23y^{156} + \cdots - 20454032272420y - 265104503689$
c_{10}	$y^{157} - 20y^{156} + \cdots + 353y - 1$
c_{12}	$y^{157} - 14y^{156} + \cdots + 135y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.201208+0.984879I$ $a=\ \ 0.215267-0.186219I$ $b=\ \ 1.176400+0.563128I$	$-1.12356-2.75108I$	0
$u=-0.201208-0.984879I$ $a=\ \ 0.215267+0.186219I$ $b=\ \ 1.176400-0.563128I$	$-1.12356+2.75108I$	0
$u=\ \ 0.073592+0.985926I$ $a=-0.061955+1.047270I$ $b=-0.341724-0.280817I$	$-5.47274-1.99235I$	0
$u=\ \ 0.073592-0.985926I$ $a=-0.061955-1.047270I$ $b=-0.341724+0.280817I$	$-5.47274+1.99235I$	0
$u=\ \ 0.163978+0.973025I$ $a=-0.547272-0.500259I$ $b=-1.85073+0.27586I$	$-1.97008+5.28169I$	0
$u=\ \ 0.163978-0.973025I$ $a=-0.547272+0.500259I$ $b=-1.85073-0.27586I$	$-1.97008-5.28169I$	0
$u=\ \ 0.978842$ $a=\ \ 0.266508$ $b=-0.0814898$	-2.97828	0
$u=\ \ 0.559456+0.800879I$ $a=\ \ 0.074828+0.468716I$ $b=\ \ 0.424074+1.306130I$	$-0.279021-0.579349I$	0
$u=\ \ 0.559456-0.800879I$ $a=\ \ 0.074828-0.468716I$ $b=\ \ 0.424074-1.306130I$	$-0.279021+0.579349I$	0
$u=-0.602309+0.828265I$ $a=-0.448183+0.442765I$ $b=\ \ 0.604976+0.013917I$	$-2.42132-5.60551I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.602309-0.828265I$ $a=-0.448183-0.442765I$ $b=\ \ 0.604976-0.013917I$	$-2.42132+5.60551I$	0
$u=-0.774462+0.683397I$ $a=-0.26860-1.67585I$ $b=\ \ 0.722832-1.110780I$	$3.73933-1.99675I$	0
$u=-0.774462-0.683397I$ $a=-0.26860+1.67585I$ $b=\ \ 0.722832+1.110780I$	$3.73933+1.99675I$	0
$u=-0.045809+1.032020I$ $a=-0.064751+1.026910I$ $b=-0.348408+1.257120I$	$-5.01032+0.14405I$	0
$u=-0.045809-1.032020I$ $a=-0.064751-1.026910I$ $b=-0.348408-1.257120I$	$-5.01032-0.14405I$	0
$u=-0.394621+0.881038I$ $a=-0.443078-0.098640I$ $b=\ \ 0.914861+0.004448I$	$-2.52117-5.72463I$	0
$u=-0.394621-0.881038I$ $a=-0.443078+0.098640I$ $b=\ \ 0.914861-0.004448I$	$-2.52117+5.72463I$	0
$u=-0.107571+1.029930I$ $a=\ \ 0.0333086-0.0080671I$ $b=\ \ 0.435800+0.751966I$	$-1.31814-2.17688I$	0
$u=-0.107571-1.029930I$ $a=\ \ 0.0333086+0.0080671I$ $b=\ \ 0.435800-0.751966I$	$-1.31814+2.17688I$	0
$u=-0.682088+0.653673I$ $a=-0.033472+1.392020I$ $b=-1.11051+1.23927I$	$-0.14301-2.01106I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.682088-0.653673I$ $a=-0.033472-1.392020I$ $b=-1.11051-1.23927I$	$-0.14301+2.01106I$	0
$u=-0.498827+0.785060I$ $a=-0.051337+1.128470I$ $b=-0.671617+1.106300I$	$0.03492-1.91028I$	0
$u=-0.498827-0.785060I$ $a=-0.051337-1.128470I$ $b=-0.671617-1.106300I$	$0.03492+1.91028I$	0
$u=0.713937+0.808691I$ $a=-2.36514-1.46548I$ $b=-2.33367-0.96370I$	$-1.62637-3.86394I$	0
$u=0.713937-0.808691I$ $a=-2.36514+1.46548I$ $b=-2.33367+0.96370I$	$-1.62637+3.86394I$	0
$u=0.709341+0.819725I$ $a=-1.064600+0.505493I$ $b=0.00550+1.60216I$	$1.58352-0.45210I$	0
$u=0.709341-0.819725I$ $a=-1.064600-0.505493I$ $b=0.00550-1.60216I$	$1.58352+0.45210I$	0
$u=0.648285+0.871160I$ $a=2.41457+1.54681I$ $b=2.91933+0.15929I$	$-2.67946+6.69375I$	0
$u=0.648285-0.871160I$ $a=2.41457-1.54681I$ $b=2.91933-0.15929I$	$-2.67946-6.69375I$	0
$u=-0.028975+0.913460I$ $a=1.11090-1.46897I$ $b=2.15217-1.09553I$	$-6.22454-5.03713I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.028975-0.913460I$ $a=\ \ 1.11090+1.46897I$ $b=\ \ 2.15217+1.09553I$	$-6.22454+5.03713I$	0
$u=-0.739150+0.798583I$ $a=\ \ 1.43082+1.34761I$ $b=-0.30481+2.39283I$	$-0.87274+4.34252I$	0
$u=-0.739150-0.798583I$ $a=\ \ 1.43082-1.34761I$ $b=-0.30481-2.39283I$	$-0.87274-4.34252I$	0
$u=-0.033004+0.909989I$ $a=-0.183970+1.006050I$ $b=\ \ 0.910284+0.357221I$	$-2.91444-1.66395I$	0
$u=-0.033004-0.909989I$ $a=-0.183970-1.006050I$ $b=\ \ 0.910284-0.357221I$	$-2.91444+1.66395I$	0
$u=-0.802189+0.743976I$ $a=\ \ 1.78310-1.90574I$ $b=\ \ 2.01442-0.28552I$	$4.33661+4.41255I$	0
$u=-0.802189-0.743976I$ $a=\ \ 1.78310+1.90574I$ $b=\ \ 2.01442+0.28552I$	$4.33661-4.41255I$	0
$u=\ \ 0.066685+0.897045I$ $a=\ \ 0.303805+1.279130I$ $b=-1.346920-0.022914I$	$-5.91062+5.71475I$	0
$u=\ \ 0.066685-0.897045I$ $a=\ \ 0.303805-1.279130I$ $b=-1.346920+0.022914I$	$-5.91062-5.71475I$	0
$u=\ \ 0.836499+0.716446I$ $a=-0.71149-1.55111I$ $b=-1.342940-0.442114I$	$5.24717-1.89423I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.836499 - 0.716446I$ $a = -0.71149 + 1.55111I$ $b = -1.342940 + 0.442114I$	$5.24717 + 1.89423I$	0
$u = 0.662839 + 0.881717I$ $a = 1.04288 + 2.88588I$ $b = 2.51223 + 2.21804I$	$-2.72596 - 1.60356I$	0
$u = 0.662839 - 0.881717I$ $a = 1.04288 - 2.88588I$ $b = 2.51223 - 2.21804I$	$-2.72596 + 1.60356I$	0
$u = -0.666368 + 0.881137I$ $a = -1.17693 + 1.72791I$ $b = -1.91037 + 1.09268I$	$0.44035 - 2.57292I$	0
$u = -0.666368 - 0.881137I$ $a = -1.17693 - 1.72791I$ $b = -1.91037 - 1.09268I$	$0.44035 + 2.57292I$	0
$u = 0.824367 + 0.741128I$ $a = -1.22906 - 1.88243I$ $b = -1.83057 - 0.40280I$	$5.56492 - 1.88516I$	0
$u = 0.824367 - 0.741128I$ $a = -1.22906 + 1.88243I$ $b = -1.83057 + 0.40280I$	$5.56492 + 1.88516I$	0
$u = 0.244778 + 0.845348I$ $a = 1.98931 - 0.13370I$ $b = 2.23901 - 0.62796I$	$-3.67693 + 6.38209I$	0
$u = 0.244778 - 0.845348I$ $a = 1.98931 + 0.13370I$ $b = 2.23901 + 0.62796I$	$-3.67693 - 6.38209I$	0
$u = 0.244159 + 1.093750I$ $a = 0.244047 + 0.779039I$ $b = 1.027040 + 0.436203I$	$-7.46203 + 2.83745I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.244159 - 1.093750I$ $a = 0.244047 - 0.779039I$ $b = 1.027040 - 0.436203I$	$-7.46203 - 2.83745I$	0
$u = -0.658047 + 0.908619I$ $a = -0.289438 - 0.016986I$ $b = -0.994896 + 0.813140I$	$-2.70986 + 0.61322I$	0
$u = -0.658047 - 0.908619I$ $a = -0.289438 + 0.016986I$ $b = -0.994896 - 0.813140I$	$-2.70986 - 0.61322I$	0
$u = -0.751262 + 0.840712I$ $a = 1.85990 - 1.03677I$ $b = 2.51953 - 0.49762I$	$3.83432 + 0.10338I$	0
$u = -0.751262 - 0.840712I$ $a = 1.85990 + 1.03677I$ $b = 2.51953 + 0.49762I$	$3.83432 - 0.10338I$	0
$u = -0.886736 + 0.708970I$ $a = -1.44238 + 1.63955I$ $b = -1.89383 + 0.19919I$	$2.2863 + 13.9596I$	0
$u = -0.886736 - 0.708970I$ $a = -1.44238 - 1.63955I$ $b = -1.89383 - 0.19919I$	$2.2863 - 13.9596I$	0
$u = 0.885906 + 0.710760I$ $a = 1.29275 + 1.60248I$ $b = 1.82115 + 0.35998I$	$5.87646 - 7.89437I$	0
$u = 0.885906 - 0.710760I$ $a = 1.29275 - 1.60248I$ $b = 1.82115 - 0.35998I$	$5.87646 + 7.89437I$	0
$u = -0.873627 + 0.726850I$ $a = -1.19204 + 1.33245I$ $b = -1.48137 + 0.42887I$	$0.03935 + 2.53379I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.873627-0.726850I$ $a=-1.19204-1.33245I$ $b=-1.48137-0.42887I$	$0.03935-2.53379I$	0
$u=\ \ 0.733500+0.872238I$ $a=-0.779568-0.903612I$ $b=-1.96498-0.89311I$	$2.93589+4.93920I$	0
$u=\ \ 0.733500-0.872238I$ $a=-0.779568+0.903612I$ $b=-1.96498+0.89311I$	$2.93589-4.93920I$	0
$u=\ \ 0.730322+0.877873I$ $a=-1.01472-1.30634I$ $b=-0.929917-0.077143I$	$2.91750+0.63600I$	0
$u=\ \ 0.730322-0.877873I$ $a=-1.01472+1.30634I$ $b=-0.929917+0.077143I$	$2.91750-0.63600I$	0
$u=\ \ 0.238558+1.120010I$ $a=\ \ 0.259216+0.662635I$ $b=\ \ 1.273900-0.095707I$	$-5.3204+13.9634I$	0
$u=\ \ 0.238558-1.120010I$ $a=\ \ 0.259216-0.662635I$ $b=\ \ 1.273900+0.095707I$	$-5.3204-13.9634I$	0
$u=-0.239835+1.121790I$ $a=-0.225286+0.707786I$ $b=-1.054240-0.009339I$	$-1.73816-7.91098I$	0
$u=-0.239835-1.121790I$ $a=-0.225286-0.707786I$ $b=-1.054240+0.009339I$	$-1.73816+7.91098I$	0
$u=-0.820144+0.802641I$ $a=-0.47769+1.91564I$ $b=-0.610996+1.173060I$	$2.88808+4.26724I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.820144-0.802641I$ $a=-0.47769-1.91564I$ $b=-0.610996-1.173060I$	$2.88808-4.26724I$	0
$u=-0.816871+0.814196I$ $a=\ \ 1.82633-1.37311I$ $b=\ \ 2.38233-0.01772I$	$5.33076+0.81756I$	0
$u=-0.816871-0.814196I$ $a=\ \ 1.82633+1.37311I$ $b=\ \ 2.38233+0.01772I$	$5.33076-0.81756I$	0
$u=\ \ 0.704571+0.918827I$ $a=\ \ 1.031810-0.631118I$ $b=-0.05049-1.60165I$	$1.27427+5.87744I$	0
$u=\ \ 0.704571-0.918827I$ $a=\ \ 1.031810+0.631118I$ $b=-0.05049+1.60165I$	$1.27427-5.87744I$	0
$u=\ \ 0.647115+0.962767I$ $a=\ \ 0.613088+0.698427I$ $b=\ \ 0.261570+0.594581I$	$-0.97306+5.41264I$	0
$u=\ \ 0.647115-0.962767I$ $a=\ \ 0.613088-0.698427I$ $b=\ \ 0.261570-0.594581I$	$-0.97306-5.41264I$	0
$u=\ \ 0.705485+0.925470I$ $a=-1.39116-2.43760I$ $b=-2.00724-2.35969I$	$-1.98803+9.30687I$	0
$u=\ \ 0.705485-0.925470I$ $a=-1.39116+2.43760I$ $b=-2.00724+2.35969I$	$-1.98803-9.30687I$	0
$u=-0.921606+0.713066I$ $a=\ \ 0.791175-0.677756I$ $b=\ \ 0.880843+0.251644I$	$1.39010+4.45714I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.921606-0.713066I$ $a=\ \ 0.791175+0.677756I$ $b=\ \ 0.880843-0.251644I$	$1.39010-4.45714I$	0
$u=-0.738476+0.907353I$ $a=\ \ 1.02500-2.23258I$ $b=\ \ 1.57320-1.47343I$	$3.62872-5.75784I$	0
$u=-0.738476-0.907353I$ $a=\ \ 1.02500+2.23258I$ $b=\ \ 1.57320+1.47343I$	$3.62872+5.75784I$	0
$u=\ \ 0.184836+0.807635I$ $a=\ \ 0.437704-1.146270I$ $b=-1.101470-0.360712I$	$-0.89775+3.22795I$	0
$u=\ \ 0.184836-0.807635I$ $a=\ \ 0.437704+1.146270I$ $b=-1.101470+0.360712I$	$-0.89775-3.22795I$	0
$u=\ \ 0.861125+0.794918I$ $a=-1.64510-1.14081I$ $b=-1.98990+0.36272I$	$5.09809-3.59030I$	0
$u=\ \ 0.861125-0.794918I$ $a=-1.64510+1.14081I$ $b=-1.98990-0.36272I$	$5.09809+3.59030I$	0
$u=\ \ 0.321132+1.129760I$ $a=\ \ 0.131254-0.090547I$ $b=-0.487912-0.201487I$	$-6.92153+4.48026I$	0
$u=\ \ 0.321132-1.129760I$ $a=\ \ 0.131254+0.090547I$ $b=-0.487912+0.201487I$	$-6.92153-4.48026I$	0
$u=\ \ 0.365755+1.119260I$ $a=\ \ 0.608376-0.148707I$ $b=\ \ 0.323099-0.938107I$	$-4.57691-6.46549I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.365755 - 1.119260I$ $a = 0.608376 + 0.148707I$ $b = 0.323099 + 0.938107I$	$-4.57691 + 6.46549I$	0
$u = -0.719740 + 0.935038I$ $a = -1.85704 - 0.85137I$ $b = -0.72664 - 2.45081I$	$-1.29110 - 9.90440I$	0
$u = -0.719740 - 0.935038I$ $a = -1.85704 + 0.85137I$ $b = -0.72664 + 2.45081I$	$-1.29110 + 9.90440I$	0
$u = -0.674454 + 0.970728I$ $a = -1.60550 + 0.47572I$ $b = -1.52755 - 0.63415I$	$-1.00910 - 3.23420I$	0
$u = -0.674454 - 0.970728I$ $a = -1.60550 - 0.47572I$ $b = -1.52755 + 0.63415I$	$-1.00910 + 3.23420I$	0
$u = 0.864216 + 0.814434I$ $a = 0.57819 + 1.47280I$ $b = 1.030760 + 0.825089I$	$7.85686 + 2.08145I$	0
$u = 0.864216 - 0.814434I$ $a = 0.57819 - 1.47280I$ $b = 1.030760 - 0.825089I$	$7.85686 - 2.08145I$	0
$u = 0.805639 + 0.091637I$ $a = -0.618943 - 0.078712I$ $b = 0.804992 + 0.590652I$	$-1.23358 + 10.56740I$	0
$u = 0.805639 - 0.091637I$ $a = -0.618943 + 0.078712I$ $b = 0.804992 - 0.590652I$	$-1.23358 - 10.56740I$	0
$u = -0.061760 + 0.807895I$ $a = 0.016424 + 0.466680I$ $b = 0.709162 + 1.069090I$	$-1.15874 - 1.91373I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.061760-0.807895I$ $a=\ \ 0.016424-0.466680I$ $b=\ \ 0.709162-1.069090I$	$-1.15874+1.91373I$	0
$u=-0.803579+0.099464I$ $a=\ \ 0.432790+0.078868I$ $b=-0.837023+0.490252I$	$2.36823-4.51997I$	0
$u=-0.803579-0.099464I$ $a=\ \ 0.432790-0.078868I$ $b=-0.837023-0.490252I$	$2.36823+4.51997I$	0
$u=-0.388401+1.126610I$ $a=-0.601116+0.104328I$ $b=-0.470464-0.535352I$	$-0.916145+0.340247I$	0
$u=-0.388401-1.126610I$ $a=-0.601116-0.104328I$ $b=-0.470464+0.535352I$	$-0.916145-0.340247I$	0
$u=\ \ 0.043691+0.792082I$ $a=-0.00747-2.35008I$ $b=-0.692674-1.055800I$	$-0.89417+2.43900I$	0
$u=\ \ 0.043691-0.792082I$ $a=-0.00747+2.35008I$ $b=-0.692674+1.055800I$	$-0.89417-2.43900I$	0
$u=-0.885820+0.826093I$ $a=-0.377775+1.292550I$ $b=-0.971445+0.710462I$	$4.31412-7.83856I$	0
$u=-0.885820-0.826093I$ $a=-0.377775-1.292550I$ $b=-0.971445-0.710462I$	$4.31412+7.83856I$	0
$u=-0.771170+0.949073I$ $a=\ \ 1.04699-2.22049I$ $b=\ \ 2.38691-1.63496I$	$4.90963-6.76885I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.771170-0.949073I$ $a=\ \ 1.04699+2.22049I$ $b=\ \ 2.38691+1.63496I$	$4.90963+6.76885I$	0
$u=\ \ 0.766267+0.104179I$ $a=-0.049069-0.227500I$ $b=\ \ 0.503150+0.325295I$	$-3.54515-0.42371I$	0
$u=\ \ 0.766267-0.104179I$ $a=-0.049069+0.227500I$ $b=\ \ 0.503150-0.325295I$	$-3.54515+0.42371I$	0
$u=-0.770147+0.958219I$ $a=-1.71648+0.47055I$ $b=-2.37628+0.34575I$	$2.40516-10.22520I$	0
$u=-0.770147-0.958219I$ $a=-1.71648-0.47055I$ $b=-2.37628-0.34575I$	$2.40516+10.22520I$	0
$u=-0.737491+0.983617I$ $a=\ \ 1.43135-2.04870I$ $b=\ \ 2.91313-1.76930I$	$3.60382-10.20860I$	0
$u=-0.737491-0.983617I$ $a=\ \ 1.43135+2.04870I$ $b=\ \ 2.91313+1.76930I$	$3.60382+10.20860I$	0
$u=-0.695779+1.016150I$ $a=\ \ 1.381670-0.246978I$ $b=\ \ 1.80775+0.50277I$	$2.72087-3.59006I$	0
$u=-0.695779-1.016150I$ $a=\ \ 1.381670+0.246978I$ $b=\ \ 1.80775-0.50277I$	$2.72087+3.59006I$	0
$u=\ \ 0.747122+0.992790I$ $a=-1.44605-1.66081I$ $b=-2.81755-1.11151I$	$4.79160+7.77443I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.747122 - 0.992790I$ $a = -1.44605 + 1.66081I$ $b = -2.81755 + 1.11151I$	$4.79160 - 7.77443I$	0
$u = -0.701512 + 0.283712I$ $a = -0.548781 - 0.592782I$ $b = 0.131801 + 0.464495I$	$-0.47725 + 1.87316I$	0
$u = -0.701512 - 0.283712I$ $a = -0.548781 + 0.592782I$ $b = 0.131801 - 0.464495I$	$-0.47725 - 1.87316I$	0
$u = 0.802156 + 0.964661I$ $a = 1.27260 + 0.76602I$ $b = 1.87417 + 0.41670I$	$7.38511 + 4.10288I$	0
$u = 0.802156 - 0.964661I$ $a = 1.27260 - 0.76602I$ $b = 1.87417 - 0.41670I$	$7.38511 - 4.10288I$	0
$u = 0.788586 + 0.979009I$ $a = -0.76738 - 2.00914I$ $b = -2.25690 - 1.67268I$	$4.51992 + 9.72455I$	0
$u = 0.788586 - 0.979009I$ $a = -0.76738 + 2.00914I$ $b = -2.25690 + 1.67268I$	$4.51992 - 9.72455I$	0
$u = 0.743355 + 1.014290I$ $a = -1.18190 - 1.11018I$ $b = -2.17273 - 0.59859I$	$4.33129 + 7.80866I$	0
$u = 0.743355 - 1.014290I$ $a = -1.18190 + 1.11018I$ $b = -2.17273 + 0.59859I$	$4.33129 - 7.80866I$	0
$u = 0.867354 + 0.916143I$ $a = 1.37265 + 1.53380I$ $b = 1.80047 + 1.10670I$	$7.90529 + 3.21163I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.867354 - 0.916143I$ $a = 1.37265 - 1.53380I$ $b = 1.80047 - 1.10670I$	$7.90529 - 3.21163I$	0
$u = 0.587080 + 0.441010I$ $a = 0.463460 - 0.272370I$ $b = -0.073387 + 0.600402I$	$0.000258 - 0.666360I$	0
$u = 0.587080 - 0.441010I$ $a = 0.463460 + 0.272370I$ $b = -0.073387 - 0.600402I$	$0.000258 + 0.666360I$	0
$u = -0.830065 + 0.964930I$ $a = -0.994683 + 0.622151I$ $b = -1.54883 + 0.18259I$	$3.88122 + 1.50611I$	0
$u = -0.830065 - 0.964930I$ $a = -0.994683 - 0.622151I$ $b = -1.54883 - 0.18259I$	$3.88122 - 1.50611I$	0
$u = -0.766378 + 1.022030I$ $a = -1.19075 + 1.51847I$ $b = -2.06503 + 1.23835I$	$-0.87494 - 8.62802I$	0
$u = -0.766378 - 1.022030I$ $a = -1.19075 - 1.51847I$ $b = -2.06503 - 1.23835I$	$-0.87494 + 8.62802I$	0
$u = 0.764418 + 1.033720I$ $a = 1.38195 + 1.69382I$ $b = 2.53218 + 1.22111I$	$4.8753 + 14.0132I$	0
$u = 0.764418 - 1.033720I$ $a = 1.38195 - 1.69382I$ $b = 2.53218 - 1.22111I$	$4.8753 - 14.0132I$	0
$u = -0.763576 + 1.034880I$ $a = -1.36017 + 1.82989I$ $b = -2.67947 + 1.42561I$	$1.2754 - 20.0776I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.763576-1.034880I$ $a=-1.36017-1.82989I$ $b=-2.67947-1.42561I$	$1.2754+20.0776I$	0
$u=-0.778791+1.045440I$ $a=\ \ 0.443795-1.090740I$ $b=\ \ 1.36039-1.08340I$	$0.34784-10.72000I$	0
$u=-0.778791-1.045440I$ $a=\ \ 0.443795+1.090740I$ $b=\ \ 1.36039+1.08340I$	$0.34784+10.72000I$	0
$u=\ \ 0.432431+1.235860I$ $a=\ \ 0.0172619+0.1357320I$ $b=-0.0895507+0.0686148I$	$-7.04904+4.71955I$	0
$u=\ \ 0.432431-1.235860I$ $a=\ \ 0.0172619-0.1357320I$ $b=-0.0895507-0.0686148I$	$-7.04904-4.71955I$	0
$u=-0.343798+0.596419I$ $a=-1.197370+0.385855I$ $b=-1.148110+0.105555I$	$0.38875-1.52343I$	$4.46721+3.96792I$
$u=-0.343798-0.596419I$ $a=-1.197370-0.385855I$ $b=-1.148110-0.105555I$	$0.38875+1.52343I$	$4.46721-3.96792I$
$u=-0.599018+0.015655I$ $a=-1.262380-0.258268I$ $b=\ \ 0.534824+0.118787I$	$1.94962+0.10775I$	$7.06611+1.55327I$
$u=-0.599018-0.015655I$ $a=-1.262380+0.258268I$ $b=\ \ 0.534824-0.118787I$	$1.94962-0.10775I$	$7.06611-1.55327I$
$u=\ \ 0.531611+0.205209I$ $a=-0.40835+1.68017I$ $b=\ \ 0.930633+0.702502I$	$-1.77645-3.56776I$	$1.01328+4.99121I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.531611 - 0.205209I$ $a = -0.40835 - 1.68017I$ $b = 0.930633 - 0.702502I$	$-1.77645 + 3.56776I$	$1.01328 - 4.99121I$
$u = 0.487349 + 0.022942I$ $a = 1.55251 + 1.07296I$ $b = -0.641072 - 0.404865I$	$1.08085 + 3.11229I$	$5.22633 - 7.56969I$
$u = 0.487349 - 0.022942I$ $a = 1.55251 - 1.07296I$ $b = -0.641072 + 0.404865I$	$1.08085 - 3.11229I$	$5.22633 + 7.56969I$
$u = 0.129012 + 0.280608I$ $a = -1.68255 - 0.57776I$ $b = -0.554269 + 0.797550I$	$0.08912 - 1.53025I$	$0.56237 + 3.19733I$
$u = 0.129012 - 0.280608I$ $a = -1.68255 + 0.57776I$ $b = -0.554269 - 0.797550I$	$0.08912 + 1.53025I$	$0.56237 - 3.19733I$
$u = 0.0987358 + 0.0498591I$ $a = -5.56334 - 8.70425I$ $b = 0.734384 - 0.716062I$	$-3.57996 - 4.96648I$	$-0.78961 + 5.61080I$
$u = 0.0987358 - 0.0498591I$ $a = -5.56334 + 8.70425I$ $b = 0.734384 + 0.716062I$	$-3.57996 + 4.96648I$	$-0.78961 - 5.61080I$

II.

$\boldsymbol{I_2^u = \langle 6u^{32}-8u^{31}+\cdots+b+3,\ u^{31}-4u^{30}+\cdots+a+1,\ u^{33}-2u^{32}+\cdots-2u-1\rangle}$

(i) Arc colorings

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

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

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

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

$$a_{10} = \begin{pmatrix} -u^{31}+4u^{30}+\cdots-10u-1 \\ -6u^{32}+8u^{31}+\cdots-2u-3 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 8u^{32}-12u^{31}+\cdots+6u+4 \\ 14u^{32}-18u^{31}+\cdots-8u-1 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -u^{32}+2u^{31}+\cdots-22u-6 \\ -9u^{32}+12u^{31}+\cdots-7u-5 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -u^{32}+u^{31}+\cdots-10u-1 \\ -7u^{32}+10u^{31}+\cdots-6u-5 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -6u^{32}+6u^{31}+\cdots+3u+2 \\ -7u^{32}+7u^{31}+\cdots+15u+3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -8u^{32}+7u^{31}+\cdots+15u+4 \\ -3u^{32}+4u^{31}+\cdots+6u-1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes

$= -32u^{32}+65u^{31}-249u^{30}+380u^{29}-1023u^{28}+1430u^{27}-3046u^{26}+3843u^{25}-6891u^{24}+8128u^{23}-12636u^{22}+13937u^{21}-18955u^{20}+19836u^{19}-23668u^{18}+23517u^{17}-24409u^{16}+23264u^{15}-20692u^{14}+18940u^{13}-13996u^{12}+12500u^{11}-7358u^{10}+6428u^9-2821u^8+2456u^7-776u^6+591u^5-212u^4+59u^3-77u^2-16u-9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_5	$u^{33} - 12u^{32} + \cdots - 12u + 1$
c_2	$u^{33} - 2u^{32} + \cdots - 2u - 1$
c_3	$u^{33} - 4u^{31} + \cdots + u - 1$
c_4	$u^{33} - 9u^{31} + \cdots - u + 1$
c_6	$u^{33} + 2u^{32} + \cdots - 2u + 1$
c_7	$u^{33} + 15u^{32} + \cdots + 19u + 1$
c_8	$u^{33} - 18u^{32} + \cdots + 22u - 1$
c_9	$u^{33} + 6u^{31} + \cdots - 4u - 1$
c_{10}	$u^{33} + 3u^{32} + \cdots + 7u - 1$
c_{11}	$u^{33} - 9u^{31} + \cdots - u - 1$
c_{12}	$u^{33} - 7u^{32} + \cdots - 3u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_5	$y^{33} + 24y^{32} + \cdots - 44y - 1$
c_2, c_6	$y^{33} + 12y^{32} + \cdots - 12y - 1$
c_3	$y^{33} - 8y^{32} + \cdots - 23y - 1$
c_4, c_{11}	$y^{33} - 18y^{32} + \cdots + 25y - 1$
c_7	$y^{33} + 5y^{32} + \cdots + 9y - 1$
c_8	$y^{33} + 2y^{32} + \cdots + 24y - 1$
c_9	$y^{33} + 12y^{32} + \cdots + 2y - 1$
c_{10}	$y^{33} - 21y^{32} + \cdots + 19y - 1$
c_{12}	$y^{33} - 19y^{32} + \cdots + 21y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ 0.979898$ $a = \ 0.181454$ $b = -0.277506$	-2.86032	31.9040
$u = -0.619913 + 0.851416I$ $a = \ 0.670261 + 0.768954I$ $b = -0.08494 + 1.69295I$	$0.618512 - 0.282062I$	$0.44891 + 2.30063I$
$u = -0.619913 - 0.851416I$ $a = \ 0.670261 - 0.768954I$ $b = -0.08494 - 1.69295I$	$0.618512 + 0.282062I$	$0.44891 - 2.30063I$
$u = -0.337223 + 0.998197I$ $a = \ 0.910239 + 0.007882I$ $b = \ 0.655075 + 0.431435I$	$-1.066640 - 0.389674I$	$-2.12985 + 2.41986I$
$u = -0.337223 - 0.998197I$ $a = \ 0.910239 - 0.007882I$ $b = \ 0.655075 - 0.431435I$	$-1.066640 + 0.389674I$	$-2.12985 - 2.41986I$
$u = -0.171996 + 0.923345I$ $a = -0.058594 - 0.592817I$ $b = \ 1.375650 + 0.231592I$	$-1.53889 - 3.89395I$	$-5.51397 + 7.40283I$
$u = -0.171996 - 0.923345I$ $a = -0.058594 + 0.592817I$ $b = \ 1.375650 - 0.231592I$	$-1.53889 + 3.89395I$	$-5.51397 - 7.40283I$
$u = -0.610306 + 0.900694I$ $a = -1.039110 - 0.240984I$ $b = -0.208657 - 0.659109I$	$0.45926 - 4.54162I$	$1.48411 + 4.51493I$
$u = -0.610306 - 0.900694I$ $a = -1.039110 + 0.240984I$ $b = -0.208657 + 0.659109I$	$0.45926 + 4.54162I$	$1.48411 - 4.51493I$
$u = \ 0.678405 + 0.857790I$ $a = \ 0.63562 + 2.08439I$ $b = \ 1.83205 + 2.36975I$	$-1.88547 - 2.45267I$	$-1.47493 + 2.66569I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.678405 - 0.857790I$ $a = 0.63562 - 2.08439I$ $b = 1.83205 - 2.36975I$	$-1.88547 + 2.45267I$	$-1.47493 - 2.66569I$
$u = 0.673593 + 0.877297I$ $a = 2.28584 + 0.93796I$ $b = 1.87259 - 0.13496I$	$-1.94769 + 7.67754I$	$-1.28925 - 9.19143I$
$u = 0.673593 - 0.877297I$ $a = 2.28584 - 0.93796I$ $b = 1.87259 + 0.13496I$	$-1.94769 - 7.67754I$	$-1.28925 + 9.19143I$
$u = 0.821904 + 0.767664I$ $a = -1.68950 - 1.61769I$ $b = -2.14986 - 0.00239I$	$4.88359 - 2.51953I$	$0.88595 + 2.08851I$
$u = 0.821904 - 0.767664I$ $a = -1.68950 + 1.61769I$ $b = -2.14986 + 0.00239I$	$4.88359 + 2.51953I$	$0.88595 - 2.08851I$
$u = -0.843843 + 0.777959I$ $a = 0.938104 - 0.983413I$ $b = 0.876751 - 0.086257I$	$2.00647 + 3.47982I$	$0.81347 - 2.39503I$
$u = -0.843843 - 0.777959I$ $a = 0.938104 + 0.983413I$ $b = 0.876751 + 0.086257I$	$2.00647 - 3.47982I$	$0.81347 + 2.39503I$
$u = 0.214773 + 0.818340I$ $a = -1.70480 + 0.28674I$ $b = -0.785589 + 0.087307I$	$-4.62507 - 4.10477I$	$-5.91447 + 2.44881I$
$u = 0.214773 - 0.818340I$ $a = -1.70480 - 0.28674I$ $b = -0.785589 - 0.087307I$	$-4.62507 + 4.10477I$	$-5.91447 - 2.44881I$
$u = 0.163339 + 0.809135I$ $a = -0.807975 - 0.105350I$ $b = -2.09434 - 0.49476I$	$-4.67990 + 5.77153I$	$-6.74734 - 7.51716I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.163339 - 0.809135I$ $a = -0.807975 + 0.105350I$ $b = -2.09434 + 0.49476I$	$-4.67990 - 5.77153I$	$-6.74734 + 7.51716I$
$u = 0.753322 + 0.978773I$ $a = -1.20740 - 2.08607I$ $b = -2.74510 - 1.61225I$	$4.22833 + 8.42449I$	$-0.53372 - 8.05694I$
$u = 0.753322 - 0.978773I$ $a = -1.20740 + 2.08607I$ $b = -2.74510 + 1.61225I$	$4.22833 - 8.42449I$	$-0.53372 + 8.05694I$
$u = -0.771478 + 0.974682I$ $a = 0.711704 - 1.162630I$ $b = 1.62338 - 1.27155I$	$1.39751 - 9.50083I$	$-0.65261 + 7.77528I$
$u = -0.771478 - 0.974682I$ $a = 0.711704 + 1.162630I$ $b = 1.62338 + 1.27155I$	$1.39751 + 9.50083I$	$-0.65261 - 7.77528I$
$u = 0.872415 + 0.916785I$ $a = -1.33154 - 1.50671I$ $b = -1.75308 - 1.09286I$	$7.85160 + 3.22634I$	$-68.9435 - 21.5095I$
$u = 0.872415 - 0.916785I$ $a = -1.33154 + 1.50671I$ $b = -1.75308 + 1.09286I$	$7.85160 - 3.22634I$	$-68.9435 + 21.5095I$
$u = 0.419962 + 1.254000I$ $a = -0.135770 - 0.140448I$ $b = -0.316653 - 0.002062I$	$-6.99392 + 4.81300I$	$18.4313 - 36.2674I$
$u = 0.419962 - 1.254000I$ $a = -0.135770 + 0.140448I$ $b = -0.316653 + 0.002062I$	$-6.99392 - 4.81300I$	$18.4313 + 36.2674I$
$u = -0.374713 + 0.530734I$ $a = -0.22784 - 1.82794I$ $b = 0.95791 - 1.30566I$	$0.53129 - 2.69066I$	$5.74958 + 9.36935I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.374713-0.530734I$ $a=-0.22784+1.82794I$ $b=\ \ 0.95791+1.30566I$	$0.53129+2.69066I$	$5.74958-9.36935I$
$u=-0.358188+0.333492I$ $a=-0.53997-1.63158I$ $b=\ \ 0.083571+0.622453I$	$0.54623+1.80775I$	$4.93406-2.81800I$
$u=-0.358188-0.333492I$ $a=-0.53997+1.63158I$ $b=\ \ 0.083571-0.622453I$	$0.54623-1.80775I$	$4.93406+2.81800I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_5	$(u^{33} - 12u^{32} + \cdots - 12u + 1)(u^{157} + 49u^{156} + \cdots + 66u - 1)$
c_2	$(u^{33} - 2u^{32} + \cdots - 2u - 1)(u^{157} - 3u^{156} + \cdots + 20u + 1)$
c_3	$(u^{33} - 4u^{31} + \cdots + u - 1)(u^{157} + u^{156} + \cdots + 1.57301 \times 10^7 u + 2315629)$
c_4	$(u^{33} - 9u^{31} + \cdots - u + 1)(u^{157} + u^{156} + \cdots + 427u + 286)$
c_6	$(u^{33} + 2u^{32} + \cdots - 2u + 1)(u^{157} - 3u^{156} + \cdots + 20u + 1)$
c_7	$(u^{33} + 15u^{32} + \cdots + 19u + 1)(u^{157} - 6u^{156} + \cdots - 586611u - 71082)$
c_8	$(u^{33} - 18u^{32} + \cdots + 22u - 1)(u^{157} + 7u^{156} + \cdots - 141270u - 7225)$
c_9	$(u^{33} + 6u^{31} + \cdots - 4u - 1)(u^{157} + u^{156} + \cdots - 1890458u - 514883)$
c_{10}	$(u^{33} + 3u^{32} + \cdots + 7u - 1)(u^{157} + 16u^{156} + \cdots + 71u + 1)$
c_{11}	$(u^{33} - 9u^{31} + \cdots - u - 1)(u^{157} + u^{156} + \cdots + 427u + 286)$
c_{12}	$(u^{33} - 7u^{32} + \cdots - 3u - 1)(u^{157} + 8u^{156} + \cdots - 61u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_5	$(y^{33}+24y^{32}+\cdots-44y-1)(y^{157}+125y^{156}+\cdots-3938y-1)$
c_2, c_6	$(y^{33}+12y^{32}+\cdots-12y-1)(y^{157}+49y^{156}+\cdots+66y-1)$
c_3	$(y^{33}-8y^{32}+\cdots-23y-1)$ $\cdot(y^{157}+17y^{156}+\cdots-194381535859813y-5362137665641)$
c_4, c_{11}	$(y^{33}-18y^{32}+\cdots+25y-1)$ $\cdot(y^{157}-93y^{156}+\cdots+2756329y-81796)$
c_7	$(y^{33}+5y^{32}+\cdots+9y-1)$ $\cdot(y^{157}-34y^{156}+\cdots-162359863767y-5052650724)$
c_8	$(y^{33}+2y^{32}+\cdots+24y-1)$ $\cdot(y^{157}-29y^{156}+\cdots+11092528050y-52200625)$
c_9	$(y^{33}+12y^{32}+\cdots+2y-1)$ $\cdot(y^{157}-23y^{156}+\cdots-20454032272420y-265104503689)$
c_{10}	$(y^{33}-21y^{32}+\cdots+19y-1)(y^{157}-20y^{156}+\cdots+353y-1)$
c_{12}	$(y^{33}-19y^{32}+\cdots+21y-1)(y^{157}-14y^{156}+\cdots+135y-1)$