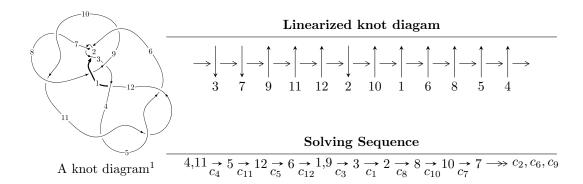
$12a_{0599} \ (K12a_{0599})$



Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -6.18140 \times 10^{106} u^{103} - 1.68839 \times 10^{107} u^{102} + \dots + 8.40136 \times 10^{106} b - 8.56625 \times 10^{106}, \\ 1.80765 \times 10^{105} u^{103} + 2.28944 \times 10^{105} u^{102} + \dots + 1.68027 \times 10^{106} a - 7.57112 \times 10^{105}, \ u^{104} + 3u^{103} + \dots + 1.68027 \times 10^{106} u^{104} + 3u^{104} + 3u^{1$$

* 1 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 104 representations.

¹The 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.
$$I_1^u = \langle -6.18 \times 10^{106} u^{103} - 1.69 \times 10^{107} u^{102} + \dots + 8.40 \times 10^{106} b - 8.57 \times 10^{106}, \ 1.81 \times 10^{105} u^{103} + 2.29 \times 10^{105} u^{102} + \dots + 1.68 \times 10^{106} a - 7.57 \times 10^{105}, \ u^{104} + 3u^{103} + \dots + 2u + 1 \rangle$$

(i) Arc colorings

$$a_{4} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_{5} = \begin{pmatrix} 1 \\ -u^{2} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u \\ -u^{3} + u \end{pmatrix}$$

$$a_{6} = \begin{pmatrix} -u^{2} + 1 \\ u^{4} - 2u^{2} \end{pmatrix}$$

$$a_{1} = \begin{pmatrix} -0.107581u^{103} - 0.136254u^{102} + \dots + 5.30403u + 0.450589 \\ 0.735762u^{103} + 2.00966u^{102} + \dots + 2.25110u + 1.01963 \end{pmatrix}$$

$$a_{9} = \begin{pmatrix} 0.540322u^{103} + 0.963064u^{102} + \dots + 4.53621u - 0.0896284 \\ -0.874844u^{103} - 2.38227u^{102} + \dots - 2.60814u - 2.37733 \end{pmatrix}$$

$$a_{2} = \begin{pmatrix} 1.88927u^{103} + 5.89937u^{102} + \dots - 0.482302u + 0.853416 \\ 1.41968u^{103} + 4.11081u^{102} + \dots + 1.60811u + 0.823482 \end{pmatrix}$$

$$a_{8} = \begin{pmatrix} -0.340032u^{103} - 0.0211301u^{102} + \dots + 4.20707u - 1.59516 \\ 2.19574u^{103} + 4.81322u^{102} + \dots + 3.24526u + 1.19118 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.540859u^{103} + 2.31345u^{102} + \dots + 5.26158u - 0.675638 \\ 2.57621u^{103} + 6.00112u^{102} + \dots + 4.56913u + 1.82368 \end{pmatrix}$$

$$a_{7} = \begin{pmatrix} -2.37733u^{103} - 6.25714u^{102} + \dots + 4.56913u + 1.82368 \\ -0.657904u^{103} - 2.25986u^{102} + \dots - 0.753556u - 2.14652 \\ -0.657904u^{103} - 2.25986u^{102} + \dots - 1.17027u - 0.540322 \end{pmatrix}$$

- (ii) Obstruction class = -1
- (iii) Cusp Shapes = $1.01554u^{103} + 4.88122u^{102} + \cdots 15.4275u + 5.37327$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{104} + 39u^{103} + \dots + 4u + 1$
c_{2}, c_{6}	$u^{104} - 3u^{103} + \dots - 4u + 1$
<i>c</i> ₃	$u^{104} - u^{103} + \dots - 22u - 1$
c_4, c_5, c_{11}	$u^{104} - 3u^{103} + \dots - 2u + 1$
c_7, c_{10}	$u^{104} + u^{103} + \dots + 34u - 1$
<i>c</i> ₈	$u^{104} + 43u^{103} + \dots + 121854u + 32269$
<i>c</i> ₉	$u^{104} + 5u^{103} + \dots - 325970u + 195737$
c_{12}	$u^{104} + 9u^{103} + \dots - 5770u - 725$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{104} + 53y^{103} + \dots + 28y + 1$
c_2, c_6	$y^{104} - 39y^{103} + \dots - 4y + 1$
<i>c</i> ₃	$y^{104} - 3y^{103} + \dots - 100y + 1$
c_4, c_5, c_{11}	$y^{104} - 91y^{103} + \dots - 4y + 1$
c_7, c_{10}	$y^{104} - 71y^{103} + \dots + 844y + 1$
c ₈	$y^{104} - 575y^{103} + \dots - 55858036808y + 1041288361$
<i>c</i> ₉	$y^{104} + 501y^{103} + \dots - 1559554340176y + 38312973169$
c_{12}	$y^{104} + 17y^{103} + \dots + 2768600y + 525625$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.989526 + 0.131041I		
a = 0.883619 - 0.264649I	-0.14536 - 4.59513I	0
b = 0.740437 - 1.108110I		
u = 0.989526 - 0.131041I		
a = 0.883619 + 0.264649I	-0.14536 + 4.59513I	0
b = 0.740437 + 1.108110I		
u = -0.846433 + 0.492394I		
a = 0.824251 + 0.236983I	5.21407 + 3.81898I	0
b = 0.921699 + 0.805391I		
u = -0.846433 - 0.492394I		
a = 0.824251 - 0.236983I	5.21407 - 3.81898I	0
b = 0.921699 - 0.805391I		
u = 0.846368 + 0.470568I		
a = -0.896666 + 0.390579I	3.57729 - 9.85375I	0
b = -0.970228 + 1.015240I		
u = 0.846368 - 0.470568I		
a = -0.896666 - 0.390579I	3.57729 + 9.85375I	0
b = -0.970228 - 1.015240I		
u = -0.345479 + 0.873329I		
a = -0.329641 + 0.633256I	2.33648 - 3.25638I	0
b = -0.515483 + 0.318246I		
u = -0.345479 - 0.873329I		
a = -0.329641 - 0.633256I	2.33648 + 3.25638I	0
b = -0.515483 - 0.318246I		
u = 0.168045 + 0.918321I		
a = 0.681538 - 0.436064I	0.23249 - 3.75946I	0
b = 0.399562 - 0.441746I		
u = 0.168045 - 0.918321I		
a = 0.681538 + 0.436064I	0.23249 + 3.75946I	0
b = 0.399562 + 0.441746I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 1.038150 + 0.281331I		
a = 0.574175 - 0.696383I	-3.13606 + 2.08755I	0
b = 0.171610 - 1.125820I		
u = 1.038150 - 0.281331I		
a = 0.574175 + 0.696383I	-3.13606 - 2.08755I	0
b = 0.171610 + 1.125820I		
u = -1.088660 + 0.148356I		
a = -0.569342 - 0.242387I	1.47163 - 0.22582I	0
b = -0.601460 - 0.855575I		
u = -1.088660 - 0.148356I		
a = -0.569342 + 0.242387I	1.47163 + 0.22582I	0
b = -0.601460 + 0.855575I		
u = 1.021500 + 0.461685I		
a = -0.132237 - 0.773987I	2.90669 + 8.60744I	0
b = -0.637551 - 0.715827I		
u = 1.021500 - 0.461685I		
a = -0.132237 + 0.773987I	2.90669 - 8.60744I	0
b = -0.637551 + 0.715827I		
u = 0.714848 + 0.496575I		
a = -0.391758 + 0.307832I	-2.18985 - 2.17775I	0
b = -0.268115 + 0.809910I		
u = 0.714848 - 0.496575I		
a = -0.391758 - 0.307832I	-2.18985 + 2.17775I	0
b = -0.268115 - 0.809910I		
u = -0.277989 + 0.805746I		
a = -0.43532 + 2.02951I	3.40888 - 8.39494I	0
b = -1.04109 + 0.98300I		
u = -0.277989 - 0.805746I		
a = -0.43532 - 2.02951I	3.40888 + 8.39494I	0
b = -1.04109 - 0.98300I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 0.271419 + 0.800534I		
a = 0.32107 + 2.33269I	1.7395 + 14.3608I	6.00000 - 9.55805I
b = 1.07449 + 1.16223I		
u = 0.271419 - 0.800534I		
a = 0.32107 - 2.33269I	1.7395 - 14.3608I	6.00000 + 9.55805I
b = 1.07449 - 1.16223I		
u = 0.301715 + 0.780914I		
a = -0.25793 + 1.53795I	-3.64893 + 6.60879I	0 7.74517I
b = 0.565053 + 0.968257I		
u = 0.301715 - 0.780914I		
a = -0.25793 - 1.53795I	-3.64893 - 6.60879I	0. + 7.74517I
b = 0.565053 - 0.968257I		
u = -1.048700 + 0.562138I		
a = 0.176179 - 0.398546I	4.38851 - 2.18462I	0
b = 0.471374 - 0.301344I		
u = -1.048700 - 0.562138I		
a = 0.176179 + 0.398546I	4.38851 + 2.18462I	0
b = 0.471374 + 0.301344I		
u = 0.162530 + 0.740437I		
a = 0.17843 - 2.11043I	-5.77665 + 1.73251I	-2.33025 - 1.80037I
b = -0.437804 - 1.169340I		
u = 0.162530 - 0.740437I		
a = 0.17843 + 2.11043I	-5.77665 - 1.73251I	-2.33025 + 1.80037I
b = -0.437804 + 1.169340I		
u = -1.248350 + 0.112459I		
a = 0.226760 + 0.106758I	2.16662 - 0.42827I	0
b = -0.791191 - 0.335299I		
u = -1.248350 - 0.112459I		
a = 0.226760 - 0.106758I	2.16662 + 0.42827I	0
b = -0.791191 + 0.335299I		

$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
-2.39932 + 8.07353I	2.96084 - 8.86760I
-2.39932 - 8.07353I	2.96084 + 8.86760I
-1.00539 - 3.04538I	5.02927 + 4.37384I
-1.00539 + 3.04538I	5.02927 - 4.37384I
4.29134 - 4.85987I	0
4.29134 + 4.85987I	0
4.66635 + 0.78468I	0
4.66635 - 0.78468I	0
5.21559 + 1.16431I	0
5.21559 - 1.16431I	0
	-2.39932 + 8.07353I $-2.39932 - 8.07353I$ $-1.00539 - 3.04538I$ $-1.00539 + 3.04538I$ $4.29134 - 4.85987I$ $4.29134 + 4.85987I$ $4.66635 + 0.78468I$ $4.66635 - 0.78468I$ $5.21559 + 1.16431I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.310210 + 0.236069I		
a = -0.157080 - 1.091820I	3.04010 - 0.83758I	0
b = 0.160988 - 0.095874I		
u = -1.310210 - 0.236069I		
a = -0.157080 + 1.091820I	3.04010 + 0.83758I	0
b = 0.160988 + 0.095874I		
u = -1.343800 + 0.078810I		
a = 0.382497 + 1.052170I	5.39810 + 4.39371I	0
b = -1.57134 - 0.37622I		
u = -1.343800 - 0.078810I		
a = 0.382497 - 1.052170I	5.39810 - 4.39371I	0
b = -1.57134 + 0.37622I		
u = 1.342890 + 0.103976I		
a = -0.658717 + 1.060560I	6.33561 + 0.56533I	0
b = 1.54649 + 0.00805I		
u = 1.342890 - 0.103976I		
a = -0.658717 - 1.060560I	6.33561 - 0.56533I	0
b = 1.54649 - 0.00805I		
u = 1.338520 + 0.257583I		
a = 0.74243 - 1.24808I	3.75246 + 5.21120I	0
b = -0.711072 - 0.202051I		
u = 1.338520 - 0.257583I		
a = 0.74243 + 1.24808I	3.75246 - 5.21120I	0
b = -0.711072 + 0.202051I		
u = 1.345000 + 0.244038I		
a = 1.001560 - 0.942439I	3.81873 + 5.22294I	0
b = -0.814953 + 0.094462I		
u = 1.345000 - 0.244038I		
a = 1.001560 + 0.942439I	3.81873 - 5.22294I	0
b = -0.814953 - 0.094462I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.353180 + 0.207483I		
a = 0.161585 + 0.980965I	6.06988 - 3.47205I	0
b = 0.347548 + 0.906497I		
u = -1.353180 - 0.207483I		
a = 0.161585 - 0.980965I	6.06988 + 3.47205I	0
b = 0.347548 - 0.906497I		
u = -0.103587 + 0.622209I		
a = 0.287222 - 1.328960I	-0.80872 - 1.97143I	3.33449 + 4.65511I
b = 0.475281 - 0.083983I		
u = -0.103587 - 0.622209I		
a = 0.287222 + 1.328960I	-0.80872 + 1.97143I	3.33449 - 4.65511I
b = 0.475281 + 0.083983I		
u = -0.142575 + 0.614426I		
a = 0.280636 - 0.888346I	-0.87795 - 2.08035I	2.20405 + 5.01346I
b = 0.811142 - 0.030751I		
u = -0.142575 - 0.614426I		
a = 0.280636 + 0.888346I	-0.87795 + 2.08035I	2.20405 - 5.01346I
b = 0.811142 + 0.030751I		
u = 0.621086 + 0.084207I		
a = 0.373074 - 0.207627I	-0.13085 + 4.71370I	6.12729 - 5.66701I
b = 0.760421 + 0.785124I		
u = 0.621086 - 0.084207I		
a = 0.373074 + 0.207627I	-0.13085 - 4.71370I	6.12729 + 5.66701I
b = 0.760421 - 0.785124I		
u = -0.241643 + 0.573906I		
a = 2.38786 + 0.68773I	2.66071 - 5.66668I	8.90037 + 9.71585I
b = 1.52226 + 0.87466I		
u = -0.241643 - 0.573906I		
a = 2.38786 - 0.68773I	2.66071 + 5.66668I	8.90037 - 9.71585I
b = 1.52226 - 0.87466I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = 1.376580 + 0.166688I		
a = -1.39265 + 1.24070I	8.70992 - 0.92166I	0
b = 0.99625 + 1.78378I		
u = 1.376580 - 0.166688I		
a = -1.39265 - 1.24070I	8.70992 + 0.92166I	0
b = 0.99625 - 1.78378I		
u = -1.378030 + 0.177745I		
a = 1.41515 + 1.05782I	8.91266 - 4.20677I	0
b = -0.55253 + 1.95449I		
u = -1.378030 - 0.177745I		
a = 1.41515 - 1.05782I	8.91266 + 4.20677I	0
b = -0.55253 - 1.95449I		
u = -1.357880 + 0.299840I		
a = -1.12463 - 1.04934I	-0.97490 - 5.49155I	0
b = 0.614318 - 1.177360I		
u = -1.357880 - 0.299840I		
a = -1.12463 + 1.04934I	-0.97490 + 5.49155I	0
b = 0.614318 + 1.177360I		
u = 0.264003 + 0.545428I		
a = -0.773141 - 0.191095I	-1.60451 - 1.80811I	0.324463 - 0.433644I
b = -0.147180 + 0.538599I		
u = 0.264003 - 0.545428I		
a = -0.773141 + 0.191095I	-1.60451 + 1.80811I	0.324463 + 0.433644I
b = -0.147180 - 0.538599I		
u = 1.370800 + 0.278221I		
a = 0.91185 - 1.51022I	3.93475 + 6.56935I	0
b = -1.39185 - 1.01737I		
u = 1.370800 - 0.278221I		
a = 0.91185 + 1.51022I	3.93475 - 6.56935I	0
b = -1.39185 + 1.01737I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.381400 + 0.222297I		
a = 0.824612 - 0.474541I	8.29547 - 3.50526I	0
b = 1.46910 + 1.43358I		
u = -1.381400 - 0.222297I		
a = 0.824612 + 0.474541I	8.29547 + 3.50526I	0
b = 1.46910 - 1.43358I		
u = 1.383110 + 0.231040I		
a = -0.666482 - 0.888282I	7.81652 + 8.64316I	0
b = -1.83700 + 1.13231I		
u = 1.383110 - 0.231040I		
a = -0.666482 + 0.888282I	7.81652 - 8.64316I	0
b = -1.83700 - 1.13231I		
u = -0.031347 + 0.595167I		
a = -6.20853 - 6.78983I	0.49697 + 2.09340I	27.5744 + 57.2719I
b = 0.207524 - 0.127759I		
u = -0.031347 - 0.595167I		
a = -6.20853 + 6.78983I	0.49697 - 2.09340I	27.5744 - 57.2719I
b = 0.207524 + 0.127759I		
u = 0.242443 + 0.543233I		
a = -2.10102 + 1.43682I	3.14800 + 0.65168I	10.52306 - 3.36761I
b = -1.17748 + 1.11016I		
u = 0.242443 - 0.543233I		
a = -2.10102 - 1.43682I	3.14800 - 0.65168I	10.52306 + 3.36761I
b = -1.17748 - 1.11016I		
u = -1.376820 + 0.285343I		
a = -1.15345 - 1.60765I	2.60570 - 11.68300I	0
b = 1.39674 - 1.41467I		
u = -1.376820 - 0.285343I		
a = -1.15345 + 1.60765I	2.60570 + 11.68300I	0
b = 1.39674 + 1.41467I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.41904 + 0.32371I		
a = 1.07007 + 1.52516I	7.1225 - 18.4287I	0
b = -1.17872 + 1.21776I		
u = -1.41904 - 0.32371I		
a = 1.07007 - 1.52516I	7.1225 + 18.4287I	0
b = -1.17872 - 1.21776I		
u = 1.42240 + 0.32497I		
a = -0.87371 + 1.42713I	8.8252 + 12.4850I	0
b = 1.16421 + 1.04993I		
u = 1.42240 - 0.32497I		
a = -0.87371 - 1.42713I	8.8252 - 12.4850I	0
b = 1.16421 - 1.04993I		
u = -1.42942 + 0.31413I		
a = 0.967730 + 0.879064I	1.87186 - 10.58530I	0
b = -0.751390 + 0.981643I		
u = -1.42942 - 0.31413I		
a = 0.967730 - 0.879064I	1.87186 + 10.58530I	0
b = -0.751390 - 0.981643I		
u = 1.44617 + 0.33353I		
a = -0.315245 + 0.785569I	8.03571 + 7.55819I	0
b = 0.809528 + 0.474654I		
u = 1.44617 - 0.33353I		
a = -0.315245 - 0.785569I	8.03571 - 7.55819I	0
b = 0.809528 - 0.474654I		
u = 0.129827 + 0.487589I		
a = 0.25714 + 2.36854I	1.33150 + 0.83954I	4.54914 + 0.82518I
b = -0.368575 + 0.570292I		
u = 0.129827 - 0.487589I		
a = 0.25714 - 2.36854I	1.33150 - 0.83954I	4.54914 - 0.82518I
b = -0.368575 - 0.570292I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.50071 + 0.02299I		
a = -0.394330 - 0.207023I	11.3902 + 8.8099I	0
b = 1.157920 + 0.717227I		
u = -1.50071 - 0.02299I		
a = -0.394330 + 0.207023I	11.3902 - 8.8099I	0
b = 1.157920 - 0.717227I		
u = 1.50978 + 0.01787I		
a = 0.369926 - 0.133517I	13.17090 - 2.70458I	0
b = -1.156850 + 0.453893I		
u = 1.50978 - 0.01787I		
a = 0.369926 + 0.133517I	13.17090 + 2.70458I	0
b = -1.156850 - 0.453893I		
u = 0.302753 + 0.373014I		
a = -1.08166 + 3.47219I	3.69173 + 2.02129I	11.76908 - 5.97446I
b = 0.443702 + 1.333090I		
u = 0.302753 - 0.373014I		
a = -1.08166 - 3.47219I	3.69173 - 2.02129I	11.76908 + 5.97446I
b = 0.443702 - 1.333090I		
u = -0.337844 + 0.323246I		
a = 0.77129 + 3.39601I	3.45433 + 2.90974I	11.59556 - 0.92056I
b = -0.824085 + 1.122500I		
u = -0.337844 - 0.323246I		
a = 0.77129 - 3.39601I	3.45433 - 2.90974I	11.59556 + 0.92056I
b = -0.824085 - 1.122500I		
u = -0.460462 + 0.007635I		
a = 0.126962 + 0.726061I	1.167780 + 0.139175I	10.38139 - 0.59279I
b = -0.808530 - 0.289273I		
u = -0.460462 - 0.007635I		
a = 0.126962 - 0.726061I	1.167780 - 0.139175I	10.38139 + 0.59279I
b = -0.808530 + 0.289273I		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
u = -1.49255 + 0.37784I		
a = 0.002911 + 0.308059I	5.52489 - 1.27377I	0
b = -0.431301 + 0.112831I		
u = -1.49255 - 0.37784I		
a = 0.002911 - 0.308059I	5.52489 + 1.27377I	0
b = -0.431301 - 0.112831I		
u = -1.59052		
a = -0.115804	5.77568	0
b = 0.474770		
u = -0.321853		
a = 1.46602	0.922749	11.9180
b = -0.616577		

II. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$u^{104} + 39u^{103} + \dots + 4u + 1$
c_2, c_6	$u^{104} - 3u^{103} + \dots - 4u + 1$
<i>c</i> ₃	$u^{104} - u^{103} + \dots - 22u - 1$
c_4, c_5, c_{11}	$u^{104} - 3u^{103} + \dots - 2u + 1$
c_7, c_{10}	$u^{104} + u^{103} + \dots + 34u - 1$
c_8	$u^{104} + 43u^{103} + \dots + 121854u + 32269$
<i>c</i> 9	$u^{104} + 5u^{103} + \dots - 325970u + 195737$
c_{12}	$u^{104} + 9u^{103} + \dots - 5770u - 725$

III. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$y^{104} + 53y^{103} + \dots + 28y + 1$
c_2, c_6	$y^{104} - 39y^{103} + \dots - 4y + 1$
<i>c</i> ₃	$y^{104} - 3y^{103} + \dots - 100y + 1$
c_4, c_5, c_{11}	$y^{104} - 91y^{103} + \dots - 4y + 1$
c_7, c_{10}	$y^{104} - 71y^{103} + \dots + 844y + 1$
c ₈	$y^{104} - 575y^{103} + \dots - 55858036808y + 1041288361$
<i>c</i> ₉	$y^{104} + 501y^{103} + \dots - 1559554340176y + 38312973169$
c_{12}	$y^{104} + 17y^{103} + \dots + 2768600y + 525625$