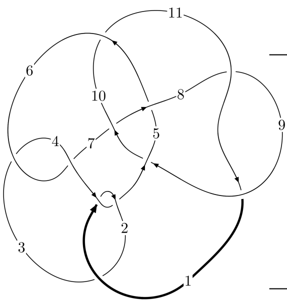
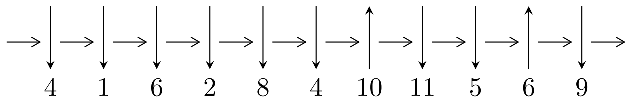
$11n_{43}$ $(K11n_{43})$



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$\begin{aligned}
I_1^u = \langle & -1.30032 \times 10^{39} u^{50} - 9.01961 \times 10^{39} u^{49} + \cdots + 8.75756 \times 10^{39} b - 1.79658 \times 10^{40}, \\
& -1.18855 \times 10^{39} u^{50} - 7.86992 \times 10^{39} u^{49} + \cdots + 5.47347 \times 10^{38} a + 1.25534 \times 10^{39}, \\
& u^{51} + 7u^{50} + \cdots - 81u^2 + 1 \rangle \\
I_2^u = \langle & b^5 - b^4 - 2b^3 + b^2 + b + 1,\ a - 1,\ u - 1 \rangle \\
I_3^u = \langle & b + 1,\ a - 4u - 6,\ u^2 + u - 1 \rangle
\end{aligned}$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 58 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. $\boldsymbol{I^u_1 = \langle -1.30\times10^{39}u^{50} - 9.02\times10^{39}u^{49} + \cdots + 8.76\times10^{39}b - 1.80\times10^{40},\ -1.19\times10^{39}u^{50} - 7.87\times10^{39}u^{49} + \cdots + 5.47\times10^{38}a + 1.26\times10^{39},\ u^{51} + 7u^{50} + \cdots - 81u^2 + 1\rangle}$

(i) Arc colorings

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

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

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

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

$$a_9 = \begin{pmatrix}2.17147u^{50} + 14.3783u^{49} + \cdots - 92.5347u - 2.29349\\0.148479u^{50} + 1.02992u^{49} + \cdots - 2.01156u + 2.05146\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}1.09719u^{50} + 7.70594u^{49} + \cdots - 90.5056u - 3.24898\\1.25327u^{50} + 6.81713u^{49} + \cdots - 2.96643u + 2.15932\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-1.96518u^{50} - 12.8342u^{49} + \cdots + 88.9231u + 7.11394\\-1.04684u^{50} - 6.52621u^{49} + \cdots - 0.236967u - 2.82088\end{pmatrix}$$

$$a_8 = \begin{pmatrix}2.21621u^{50} + 14.3423u^{49} + \cdots - 4.63645u + 11.0109\\-0.0694094u^{50} + 0.202698u^{49} + \cdots - 9.54759u + 1.43747\end{pmatrix}$$

$$a_6 = \begin{pmatrix}-0.109838u^{50} + 0.455800u^{49} + \cdots - 35.3698u + 2.83830\\2.10336u^{50} + 11.3955u^{49} + \cdots - 4.83182u + 1.99352\end{pmatrix}$$

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

$$a_7 = \begin{pmatrix}-0.109838u^{50} + 0.455800u^{49} + \cdots - 35.3698u + 2.83830\\1.41865u^{50} + 6.00756u^{49} + \cdots - 4.72198u + 0.768857\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.109838u^{50} + 0.455800u^{49} + \cdots - 35.3698u + 2.83830\\1.41865u^{50} + 6.00756u^{49} + \cdots - 4.72198u + 0.768857\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 1.81706u^{50} + 20.2990u^{49} + \cdots - 41.2566u + 8.01207$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_4	$u^{51} - 7u^{50} + \cdots + 81u^2 - 1$
c_2	$u^{51} + 23u^{50} + \cdots + 162u + 1$
c_3, c_6	$u^{51} - 2u^{50} + \cdots - 96u - 32$
c_5	$u^{51} - 3u^{50} + \cdots + 2u - 1$
c_7	$u^{51} + 8u^{50} + \cdots + 64u + 4$
c_8, c_{11}	$u^{51} - 4u^{50} + \cdots - 87u + 1$
c_9	$u^{51} + 5u^{50} + \cdots - 402u - 137$
c_{10}	$u^{51} + u^{50} + \cdots - 4u + 31$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_4	$y^{51} - 23y^{50} + \cdots + 162y - 1$
c_2	$y^{51} + 17y^{50} + \cdots + 12790y - 1$
c_3, c_6	$y^{51} + 30y^{50} + \cdots - 8704y - 1024$
c_5	$y^{51} - 15y^{50} + \cdots + 20y - 1$
c_7	$y^{51} - 12y^{50} + \cdots + 1272y - 16$
c_8, c_{11}	$y^{51} - 30y^{50} + \cdots + 6683y - 1$
c_9	$y^{51} + 37y^{50} + \cdots + 211472y - 18769$
c_{10}	$y^{51} + 29y^{50} + \cdots + 22708y - 961$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.923570 + 0.305757I$ $a = -0.56446 - 2.60605I$ $b = 1.108610 + 0.499436I$	$-3.69039 - 2.13393I$	$-15.8264 + 4.5625I$
$u = 0.923570 - 0.305757I$ $a = -0.56446 + 2.60605I$ $b = 1.108610 - 0.499436I$	$-3.69039 + 2.13393I$	$-15.8264 - 4.5625I$
$u = -0.359247 + 0.982542I$ $a = 0.110085 + 0.563683I$ $b = -0.885970 - 0.593352I$	$4.54085 - 1.95941I$	$-3.52747 + 2.51429I$
$u = -0.359247 - 0.982542I$ $a = 0.110085 - 0.563683I$ $b = -0.885970 + 0.593352I$	$4.54085 + 1.95941I$	$-3.52747 - 2.51429I$
$u = -0.872616 + 0.581002I$ $a = 0.200453 + 0.860825I$ $b = 1.74486 + 0.17305I$	$-2.26568 + 2.29719I$	$-12.40272 - 3.03914I$
$u = -0.872616 - 0.581002I$ $a = 0.200453 - 0.860825I$ $b = 1.74486 - 0.17305I$	$-2.26568 - 2.29719I$	$-12.40272 + 3.03914I$
$u = -0.788139 + 0.707702I$ $a = -0.197062 - 1.246490I$ $b = 0.879652 + 0.299225I$	$1.43007 + 1.84298I$	$-7.00000 - 8.98031I$
$u = -0.788139 - 0.707702I$ $a = -0.197062 + 1.246490I$ $b = 0.879652 - 0.299225I$	$1.43007 - 1.84298I$	$-7.00000 + 8.98031I$
$u = 0.744937 + 0.557874I$ $a = 0.337383 - 1.321850I$ $b = -0.203100 + 0.865788I$	$0.62734 - 3.24727I$	$-5.87868 + 5.45997I$
$u = 0.744937 - 0.557874I$ $a = 0.337383 + 1.321850I$ $b = -0.203100 - 0.865788I$	$0.62734 + 3.24727I$	$-5.87868 - 5.45997I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.073300 + 0.130259I$ $a = -0.350884 - 1.323440I$ $b = 1.192740 - 0.253796I$	$-4.21875 + 0.45905I$	$-12.7704 - 7.0072I$
$u = 1.073300 - 0.130259I$ $a = -0.350884 + 1.323440I$ $b = 1.192740 + 0.253796I$	$-4.21875 - 0.45905I$	$-12.7704 + 7.0072I$
$u = -0.665417 + 0.633317I$ $a = -0.891675 - 0.347330I$ $b = 0.946736 + 0.983782I$	$0.08535 - 1.42859I$	$-8.20291 + 2.86015I$
$u = -0.665417 - 0.633317I$ $a = -0.891675 + 0.347330I$ $b = 0.946736 - 0.983782I$	$0.08535 + 1.42859I$	$-8.20291 - 2.86015I$
$u = -0.603362 + 0.919845I$ $a = -0.417893 - 1.298460I$ $b = -0.357813 + 1.171210I$	$6.12236 - 2.89222I$	$-7.00000 + 0.I$
$u = -0.603362 - 0.919845I$ $a = -0.417893 + 1.298460I$ $b = -0.357813 - 1.171210I$	$6.12236 + 2.89222I$	$-7.00000 + 0.I$
$u = 0.709519 + 0.862840I$ $a = 0.722213 - 0.172154I$ $b = -0.978955 + 0.420067I$	$-1.46329 + 2.48395I$	0
$u = 0.709519 - 0.862840I$ $a = 0.722213 + 0.172154I$ $b = -0.978955 - 0.420067I$	$-1.46329 - 2.48395I$	0
$u = -0.923670 + 0.689242I$ $a = 1.03818 + 2.23313I$ $b = 1.060170 - 0.222360I$	$1.01385 + 3.52246I$	0
$u = -0.923670 - 0.689242I$ $a = 1.03818 - 2.23313I$ $b = 1.060170 + 0.222360I$	$1.01385 - 3.52246I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.437529+1.071430I$ $a=\ \ 0.555165+0.712106I$ $b=-1.24641-0.67694I$	$3.27749-9.36362I$	0
$u=-0.437529-1.071430I$ $a=\ \ 0.555165-0.712106I$ $b=-1.24641+0.67694I$	$3.27749+9.36362I$	0
$u=-0.834183+0.022964I$ $a=-1.240400-0.071253I$ $b=-1.46648-0.21508I$	$-7.16136-4.34566I$	$0.37647+1.57270I$
$u=-0.834183-0.022964I$ $a=-1.240400+0.071253I$ $b=-1.46648+0.21508I$	$-7.16136+4.34566I$	$0.37647-1.57270I$
$u=\ \ 1.051020+0.519122I$ $a=-0.876858+0.965223I$ $b=-0.593255-0.386139I$	$-0.294650-1.061440I$	0
$u=\ \ 1.051020-0.519122I$ $a=-0.876858-0.965223I$ $b=-0.593255+0.386139I$	$-0.294650+1.061440I$	0
$u=-0.993259+0.639230I$ $a=\ \ 0.50831+1.57361I$ $b=\ \ 1.30081-0.93720I$	$-0.91339+6.46505I$	0
$u=-0.993259-0.639230I$ $a=\ \ 0.50831-1.57361I$ $b=\ \ 1.30081+0.93720I$	$-0.91339-6.46505I$	0
$u=\ \ 1.222940+0.084782I$ $a=-0.880621+0.184837I$ $b=-0.175938+0.530024I$	$-1.13007-1.28368I$	0
$u=\ \ 1.222940-0.084782I$ $a=-0.880621-0.184837I$ $b=-0.175938-0.530024I$	$-1.13007+1.28368I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.719478+1.003150I$ $a=-0.078844-0.785446I$ $b=-0.623365+0.588618I$	$5.28316+2.70789I$	0
$u=-0.719478-1.003150I$ $a=-0.078844+0.785446I$ $b=-0.623365-0.588618I$	$5.28316-2.70789I$	0
$u=0.990585+0.737126I$ $a=0.01937+1.54321I$ $b=-1.190760-0.548951I$	$-2.32039-8.39966I$	0
$u=0.990585-0.737126I$ $a=0.01937-1.54321I$ $b=-1.190760+0.548951I$	$-2.32039+8.39966I$	0
$u=0.742417+0.124155I$ $a=-3.86813-7.11674I$ $b=0.960382-0.003997I$	$-2.64938-0.11132I$	$-58.9394+3.8883I$
$u=0.742417-0.124155I$ $a=-3.86813+7.11674I$ $b=0.960382+0.003997I$	$-2.64938+0.11132I$	$-58.9394-3.8883I$
$u=-1.086370+0.734156I$ $a=0.744054+0.739625I$ $b=-0.176246-1.311490I$	$4.63878+8.97661I$	0
$u=-1.086370-0.734156I$ $a=0.744054-0.739625I$ $b=-0.176246+1.311490I$	$4.63878-8.97661I$	0
$u=-1.035770+0.809017I$ $a=0.136581+0.365352I$ $b=-0.281742-0.574694I$	$4.27954+3.84215I$	0
$u=-1.035770-0.809017I$ $a=0.136581-0.365352I$ $b=-0.281742+0.574694I$	$4.27954-3.84215I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.650449$ $a = -0.858462$ $b = -0.0122379$	-1.00288	-10.0670
$u = -1.227370 + 0.667999I$ $a = -0.673896 - 1.098580I$ $b = -1.113660 + 0.462367I$	$1.87901 + 7.98783I$	0
$u = -1.227370 - 0.667999I$ $a = -0.673896 + 1.098580I$ $b = -1.113660 - 0.462367I$	$1.87901 - 7.98783I$	0
$u = -1.213470 + 0.718395I$ $a = -0.57099 - 1.54335I$ $b = -1.36456 + 0.66315I$	$0.8642 + 15.7945I$	0
$u = -1.213470 - 0.718395I$ $a = -0.57099 + 1.54335I$ $b = -1.36456 - 0.66315I$	$0.8642 - 15.7945I$	0
$u = 1.46886 + 0.10563I$ $a = -0.596843 + 0.030342I$ $b = -1.121090 + 0.463770I$	$-3.74009 + 5.32281I$	0
$u = 1.46886 - 0.10563I$ $a = -0.596843 - 0.030342I$ $b = -1.121090 - 0.463770I$	$-3.74009 - 5.32281I$	0
$u = -1.64237$ $a = -0.478176$ $b = -0.962556$	-10.4502	0
$u = -0.218706 + 0.056088I$ $a = -0.19747 + 1.88909I$ $b = 0.500772 + 0.518382I$	$-0.61038 - 1.48999I$	$-4.46560 + 4.54978I$
$u = -0.218706 - 0.056088I$ $a = -0.19747 - 1.88909I$ $b = 0.500772 - 0.518382I$	$-0.61038 + 1.48999I$	$-4.46560 - 4.54978I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 0.0948151$ $a = -15.5949$ $b = \ \ 1.14404$	-2.29513	-1.15090

II. $I_2^u = \langle b^5 - b^4 - 2b^3 + b^2 + b + 1,\ a - 1,\ u - 1\rangle$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= 3b^4 + b^3 - 2b^2 - 10b - 17$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^5$
c_3, c_6	y^5
c_5	$y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1$
c_7, c_{10}	$y^5 + 3y^4 + 4y^3 + y^2 - y - 1$
c_8, c_9, c_{11}	$y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = 1.00000$ $b = -1.21774$	-4.04602	-2.99730
$u = 1.00000$ $a = 1.00000$ $b = -0.309916 + 0.549911I$	$-1.97403 + 1.53058I$	$-13.4575 - 4.4032I$
$u = 1.00000$ $a = 1.00000$ $b = -0.309916 - 0.549911I$	$-1.97403 - 1.53058I$	$-13.4575 + 4.4032I$
$u = 1.00000$ $a = 1.00000$ $b = 1.41878 + 0.21917I$	$-7.51750 - 4.40083I$	$-22.0438 + 5.2094I$
$u = 1.00000$ $a = 1.00000$ $b = 1.41878 - 0.21917I$	$-7.51750 + 4.40083I$	$-22.0438 - 5.2094I$

III. $I_3^u = \langle b+1,\ a-4u-6,\ u^2+u-1\rangle$

(i) Arc colorings

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

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

$$a_2 = \begin{pmatrix} 1 \\ -u+1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ -u+1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 4u+6 \\ -1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3u+5 \\ 0 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 4u+7 \\ -1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1 \\ -u+1 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -61$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_6	$y^2 - 3y + 1$
c_2, c_5, c_9 c_{10}	$y^2 - 7y + 1$
c_7	y^2
c_8, c_{11}	$(y-1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.618034$ $a = 8.47214$ $b = -1.00000$	-2.63189	-61.0000
$u = -1.61803$ $a = -0.472136$ $b = -1.00000$	-10.5276	-61.0000

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^2+u-1)(u^{51}-7u^{50}+\cdots+81u^2-1)$
c_2	$((u+1)^5)(u^2+3u+1)(u^{51}+23u^{50}+\cdots+162u+1)$
c_3	$u^5(u^2+u-1)(u^{51}-2u^{50}+\cdots-96u-32)$
c_4	$((u+1)^5)(u^2-u-1)(u^{51}-7u^{50}+\cdots+81u^2-1)$
c_5	$(u^2-3u+1)(u^5-3u^4+\cdots-u+1)(u^{51}-3u^{50}+\cdots+2u-1)$
c_6	$u^5(u^2-u-1)(u^{51}-2u^{50}+\cdots-96u-32)$
c_7	$u^2(u^5-u^4+\cdots+u-1)(u^{51}+8u^{50}+\cdots+64u+4)$
c_8	$((u-1)^2)(u^5+u^4+\cdots+u-1)(u^{51}-4u^{50}+\cdots-87u+1)$
c_9	$(u^2-3u+1)(u^5-u^4+\cdots+u+1)(u^{51}+5u^{50}+\cdots-402u-137)$
c_{10}	$(u^2-3u+1)(u^5+u^4+\cdots+u+1)(u^{51}+u^{50}+\cdots-4u+31)$
c_{11}	$((u+1)^2)(u^5-u^4+\cdots+u+1)(u^{51}-4u^{50}+\cdots-87u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_4	$((y-1)^5)(y^2-3y+1)(y^{51}-23y^{50}+\cdots+162y-1)$
c_2	$((y-1)^5)(y^2-7y+1)(y^{51}+17y^{50}+\cdots+12790y-1)$
c_3, c_6	$y^5(y^2-3y+1)(y^{51}+30y^{50}+\cdots-8704y-1024)$
c_5	$(y^2-7y+1)(y^5-y^4+\cdots+3y-1)(y^{51}-15y^{50}+\cdots+20y-1)$
c_7	$y^2(y^5+3y^4+\cdots-y-1)(y^{51}-12y^{50}+\cdots+1272y-16)$
c_8, c_{11}	$((y-1)^2)(y^5-5y^4+\cdots-y-1)(y^{51}-30y^{50}+\cdots+6683y-1)$
c_9	$(y^2-7y+1)(y^5-5y^4+8y^3-3y^2-y-1)$ $\cdot(y^{51}+37y^{50}+\cdots+211472y-18769)$
c_{10}	$(y^2-7y+1)(y^5+3y^4+4y^3+y^2-y-1)$ $\cdot(y^{51}+29y^{50}+\cdots+22708y-961)$