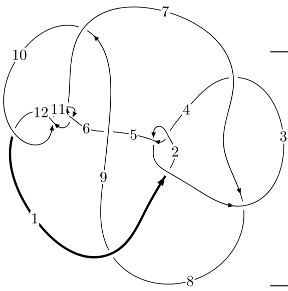
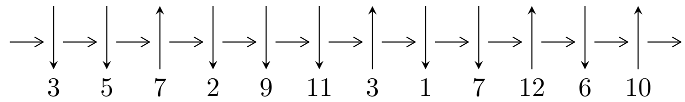
$12n_{0161}$ ($K12n_{0161}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle -u^{52} + u^{51} + \cdots + b + u,\ -u^{52} + u^{51} + \cdots + a + 5u,\ u^{54} - 2u^{53} + \cdots + 4u^2 - 1\rangle$$
$$I_2^u = \langle -u^5 - u^3 + b - u + 1,\ u^7 + u^6 + 2u^5 + u^4 + 2u^3 + u^2 + a + u,\ u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u -$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 63 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.

$$\boldsymbol{I^u_1 = \langle -u^{52}+u^{51}+\cdots+b+u,\ -u^{52}+u^{51}+\cdots+a+5u,\ u^{54}-2u^{53}+\cdots+4u^2-1\rangle}$$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^{52} - u^{51} + \cdots + 6u^2 - 5u \\ u^{52} - u^{51} + \cdots + 3u^2 - u \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^{53} + 3u^{52} + \cdots - 6u - 1 \\ u^{53} + u^{52} + \cdots + 2u^2 - 2u \end{pmatrix}$$
$$a_8 = \begin{pmatrix} u^{17} + 2u^{15} + 5u^{13} + 6u^{11} + 7u^9 + 6u^7 + 4u^5 + 2u^3 + u \\ -u^{17} - 3u^{15} - 7u^{13} - 10u^{11} - 11u^9 - 8u^7 - 4u^5 + u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^5 - u \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^5 + u \\ u^7 + u^5 + 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^{12} - u^{10} - 3u^8 - 2u^6 - 2u^4 - u^2 + 1 \\ -u^{14} - 2u^{12} - 5u^{10} - 6u^8 - 6u^6 - 4u^4 - u^2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^{50} - u^{49} + \cdots - 5u + 1 \\ u^{52} - u^{51} + \cdots - 5u^3 + 3u^2 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{53} + 2u^{52} + \cdots + 4u - 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{54} + 14u^{53} + \cdots + 12u + 1$
c_2, c_4	$u^{54} - 10u^{53} + \cdots + 8u - 1$
c_3, c_7	$u^{54} - u^{53} + \cdots - 1024u + 512$
c_5	$u^{54} + 2u^{53} + \cdots + 220u - 200$
c_6, c_{11}	$u^{54} + 2u^{53} + \cdots + 4u^2 - 1$
c_8	$u^{54} - 2u^{53} + \cdots - 2u + 1$
c_9	$u^{54} - 10u^{53} + \cdots + 676u - 61$
c_{10}, c_{12}	$u^{54} - 18u^{53} + \cdots + 8u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{54} + 62y^{53} + \cdots - 72y + 1$
c_2, c_4	$y^{54} - 14y^{53} + \cdots - 12y + 1$
c_3, c_7	$y^{54} - 57y^{53} + \cdots - 5767168y + 262144$
c_5	$y^{54} + 2y^{53} + \cdots + 341200y + 40000$
c_6, c_{11}	$y^{54} + 18y^{53} + \cdots - 8y + 1$
c_8	$y^{54} + 62y^{53} + \cdots - 8y + 1$
c_9	$y^{54} + 10y^{53} + \cdots - 22900y + 3721$
c_{10}, c_{12}	$y^{54} + 38y^{53} + \cdots - 68y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.593814 + 0.806287I$ $a = -0.636999 - 0.227987I$ $b = -0.1217130 - 0.0332567I$	$-0.33427 - 1.89104I$	$-1.02934 + 3.26612I$
$u = 0.593814 - 0.806287I$ $a = -0.636999 + 0.227987I$ $b = -0.1217130 + 0.0332567I$	$-0.33427 + 1.89104I$	$-1.02934 - 3.26612I$
$u = 0.180121 + 0.965813I$ $a = -0.594859 - 0.700416I$ $b = 0.136216 + 0.368678I$	$1.26301 - 2.44603I$	$2.73199 + 4.98223I$
$u = 0.180121 - 0.965813I$ $a = -0.594859 + 0.700416I$ $b = 0.136216 - 0.368678I$	$1.26301 + 2.44603I$	$2.73199 - 4.98223I$
$u = 0.071641 + 1.019550I$ $a = 1.27503 - 1.16413I$ $b = -0.851885 + 0.413364I$	$3.28922 - 2.50118I$	$2.52265 + 4.62453I$
$u = 0.071641 - 1.019550I$ $a = 1.27503 + 1.16413I$ $b = -0.851885 - 0.413364I$	$3.28922 + 2.50118I$	$2.52265 - 4.62453I$
$u = -0.760882 + 0.685041I$ $a = -0.333764 - 0.729244I$ $b = -0.91421 + 1.34330I$	$-2.42886 - 2.49711I$	$-6.09592 + 3.26971I$
$u = -0.760882 - 0.685041I$ $a = -0.333764 + 0.729244I$ $b = -0.91421 - 1.34330I$	$-2.42886 + 2.49711I$	$-6.09592 - 3.26971I$
$u = 0.803356 + 0.644099I$ $a = -0.363676 + 0.484008I$ $b = -2.27231 - 0.36526I$	$4.20288 + 1.73783I$	$-3.96774 + 0.13211I$
$u = 0.803356 - 0.644099I$ $a = -0.363676 - 0.484008I$ $b = -2.27231 + 0.36526I$	$4.20288 - 1.73783I$	$-3.96774 - 0.13211I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.743941 + 0.723947I$ $a = 1.296630 + 0.497606I$ $b = 0.351768 + 1.145760I$	$-4.60943 + 0.53524I$	$-6.65010 + 0.78439I$
$u = 0.743941 - 0.723947I$ $a = 1.296630 - 0.497606I$ $b = 0.351768 - 1.145760I$	$-4.60943 - 0.53524I$	$-6.65010 - 0.78439I$
$u = -0.040432 + 0.958127I$ $a = -2.37271 + 0.02401I$ $b = 1.54595 + 0.64385I$	$0.680231 + 1.026360I$	$0.362891 + 0.577482I$
$u = -0.040432 - 0.958127I$ $a = -2.37271 - 0.02401I$ $b = 1.54595 - 0.64385I$	$0.680231 - 1.026360I$	$0.362891 - 0.577482I$
$u = -0.714465 + 0.763494I$ $a = 0.138140 + 1.250370I$ $b = 1.70446 - 1.06690I$	$-3.72278 + 1.64945I$	$-9.08237 - 1.96376I$
$u = -0.714465 - 0.763494I$ $a = 0.138140 - 1.250370I$ $b = 1.70446 + 1.06690I$	$-3.72278 - 1.64945I$	$-9.08237 + 1.96376I$
$u = 0.823105 + 0.665323I$ $a = 0.319376 - 0.932123I$ $b = 2.69399 + 0.67083I$	$3.08774 + 8.72867I$	$-5.48413 - 4.26141I$
$u = 0.823105 - 0.665323I$ $a = 0.319376 + 0.932123I$ $b = 2.69399 - 0.67083I$	$3.08774 - 8.72867I$	$-5.48413 + 4.26141I$
$u = -0.097324 + 1.084370I$ $a = 3.37839 - 1.05528I$ $b = -2.41040 + 0.52269I$	$10.44700 + 1.25812I$	$2.80140 - 1.05629I$
$u = -0.097324 - 1.084370I$ $a = 3.37839 + 1.05528I$ $b = -2.41040 - 0.52269I$	$10.44700 - 1.25812I$	$2.80140 + 1.05629I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.128512+1.081900I$ $a=-3.37735+0.83410I$ $b=\ \ 2.46629-0.51176I$	$9.60149+8.44587I$	$1.50673-5.85664I$
$u=-0.128512-1.081900I$ $a=-3.37735-0.83410I$ $b=\ \ 2.46629+0.51176I$	$9.60149-8.44587I$	$1.50673+5.85664I$
$u=-0.807760+0.739295I$ $a=-0.520537+0.077016I$ $b=\ \ 0.673789+0.625242I$	$-5.15070-1.55728I$	$-3.41228+1.62313I$
$u=-0.807760-0.739295I$ $a=-0.520537-0.077016I$ $b=\ \ 0.673789-0.625242I$	$-5.15070+1.55728I$	$-3.41228-1.62313I$
$u=-0.506885+0.991107I$ $a=-1.80520+1.33240I$ $b=\ \ 0.96224+1.21089I$	$7.37339-2.01731I$	0
$u=-0.506885-0.991107I$ $a=-1.80520-1.33240I$ $b=\ \ 0.96224-1.21089I$	$7.37339+2.01731I$	0
$u=\ \ 0.624887+0.943323I$ $a=-0.228701+0.787647I$ $b=-0.307430+0.090678I$	$0.16355-2.91161I$	$0.+2.36931I$
$u=\ \ 0.624887-0.943323I$ $a=-0.228701-0.787647I$ $b=-0.307430-0.090678I$	$0.16355+2.91161I$	$0.-2.36931I$
$u=-0.548486+1.001280I$ $a=\ \ 2.24692-1.41567I$ $b=-1.39112-1.33428I$	$7.75921+5.16031I$	$0.-5.15990I$
$u=-0.548486-1.001280I$ $a=\ \ 2.24692+1.41567I$ $b=-1.39112+1.33428I$	$7.75921-5.16031I$	$0.+5.15990I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.782876 + 0.849138I$ $a = -0.281362 + 1.292200I$ $b = -0.282478 - 0.823905I$	$-0.09216 - 5.90377I$	$-6.51038 + 5.50131I$
$u = 0.782876 - 0.849138I$ $a = -0.281362 - 1.292200I$ $b = -0.282478 + 0.823905I$	$-0.09216 + 5.90377I$	$-6.51038 - 5.50131I$
$u = -0.684869 + 0.949371I$ $a = -1.65615 + 1.47578I$ $b = 2.17505 + 0.72111I$	$-3.14902 + 3.72291I$	$-7.13132 + 0.I$
$u = -0.684869 - 0.949371I$ $a = -1.65615 - 1.47578I$ $b = 2.17505 - 0.72111I$	$-3.14902 - 3.72291I$	$-7.13132 + 0.I$
$u = 0.767085 + 0.893425I$ $a = 0.565950 - 0.681295I$ $b = -0.571422 + 0.670697I$	$0.0463916 + 0.0789452I$	0
$u = 0.767085 - 0.893425I$ $a = 0.565950 + 0.681295I$ $b = -0.571422 - 0.670697I$	$0.0463916 - 0.0789452I$	0
$u = 0.697552 + 0.975593I$ $a = -1.103840 - 0.722587I$ $b = 0.62795 - 1.51314I$	$-3.84507 - 6.03561I$	0
$u = 0.697552 - 0.975593I$ $a = -1.103840 + 0.722587I$ $b = 0.62795 + 1.51314I$	$-3.84507 + 6.03561I$	0
$u = -0.697282 + 0.998483I$ $a = 1.81767 - 0.37021I$ $b = -1.27625 - 1.22230I$	$-1.48579 + 8.04265I$	0
$u = -0.697282 - 0.998483I$ $a = 1.81767 + 0.37021I$ $b = -1.27625 + 1.22230I$	$-1.48579 - 8.04265I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.737707 + 0.986539I$ $a = 0.264849 + 0.912543I$ $b = 0.567709 - 0.785725I$	$-4.39392 + 7.36741I$	0
$u = -0.737707 - 0.986539I$ $a = 0.264849 - 0.912543I$ $b = 0.567709 + 0.785725I$	$-4.39392 - 7.36741I$	0
$u = 0.702152 + 1.027660I$ $a = 1.34427 + 2.48138I$ $b = -2.60875 + 0.42340I$	$5.35703 - 7.40628I$	0
$u = 0.702152 - 1.027660I$ $a = 1.34427 - 2.48138I$ $b = -2.60875 - 0.42340I$	$5.35703 + 7.40628I$	0
$u = 0.717612 + 1.027020I$ $a = -1.72080 - 2.58367I$ $b = 3.11897 - 0.58149I$	$4.1859 - 14.5074I$	0
$u = 0.717612 - 1.027020I$ $a = -1.72080 + 2.58367I$ $b = 3.11897 + 0.58149I$	$4.1859 + 14.5074I$	0
$u = -0.649599 + 0.312516I$ $a = -0.395839 + 0.699565I$ $b = -1.50211 + 0.45460I$	$5.93552 - 0.76797I$	$-3.85312 - 0.11331I$
$u = -0.649599 - 0.312516I$ $a = -0.395839 - 0.699565I$ $b = -1.50211 - 0.45460I$	$5.93552 + 0.76797I$	$-3.85312 + 0.11331I$
$u = -0.660388 + 0.239204I$ $a = 0.392626 - 1.167170I$ $b = 1.385750 - 0.144674I$	$5.30723 + 6.14183I$	$-5.10684 - 4.83754I$
$u = -0.660388 - 0.239204I$ $a = 0.392626 + 1.167170I$ $b = 1.385750 + 0.144674I$	$5.30723 - 6.14183I$	$-5.10684 + 4.83754I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.570438$ $a = -0.597054$ $b = 0.412635$	-1.74370	-4.75930
$u = 0.401684 + 0.251203I$ $a = -0.718595 - 0.849362I$ $b = -0.003567 + 0.541793I$	$-0.534257 - 1.150530I$	$-6.04520 + 5.80427I$
$u = 0.401684 - 0.251203I$ $a = -0.718595 + 0.849362I$ $b = -0.003567 - 0.541793I$	$-0.534257 + 1.150530I$	$-6.04520 - 5.80427I$
$u = -0.320915$ $a = 2.73811$ $b = 0.794388$	-2.14124	-1.56380

II. $\boldsymbol{I_2^u = \langle -u^5 - u^3 + b - u + 1,\ u^7 + u^6 + 2u^5 + u^4 + 2u^3 + u^2 + a + u,\ u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1 \rangle}$

(i) Arc colorings

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -u^7 - u^6 - 2u^5 - u^4 - 2u^3 - u^2 - u \\ u^5 + u^3 + u - 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -u^7 - u^6 - 2u^5 - u^4 - 2u^3 - u^2 - u \\ u^5 + u^3 + u - 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -u^3 \\ u^3 + u \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -u^5 - u \\ u^5 + u^3 + u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} u^5 + u \\ u^7 + u^5 + 2u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} u^5 + u \\ -u^5 - u^3 - u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^7 - u^6 - 3u^5 - u^4 - 2u^3 - u^2 - 2u \\ 2u^5 + 2u^3 + 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4u^7 - 4u^6 - 5u^5 - 5u^4 - 10u^3 - 5u^2 - u - 11$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u-1)^9$
c_3, c_7	u^9
c_4	$(u+1)^9$
c_5, c_8	$u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1$
c_6	$u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1$
c_9	$u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1$
c_{10}	$u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1$
c_{11}	$u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1$
c_{12}	$u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^9$
c_3, c_7	y^9
c_5, c_8	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_6, c_{11}	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_9	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_{10}, c_{12}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.140343 + 0.966856I$ $a = 0.900982 - 0.594909I$ $b = -0.663053 + 0.788921I$	$0.13850 - 2.09337I$	$-4.27981 + 4.44592I$
$u = 0.140343 - 0.966856I$ $a = 0.900982 + 0.594909I$ $b = -0.663053 - 0.788921I$	$0.13850 + 2.09337I$	$-4.27981 - 4.44592I$
$u = 0.628449 + 0.875112I$ $a = 0.249476 + 1.304240I$ $b = -1.52709 - 0.20930I$	$-2.26187 - 2.45442I$	$-4.16203 + 2.47153I$
$u = 0.628449 - 0.875112I$ $a = 0.249476 - 1.304240I$ $b = -1.52709 + 0.20930I$	$-2.26187 + 2.45442I$	$-4.16203 - 2.47153I$
$u = -0.796005 + 0.733148I$ $a = -0.766570 + 0.255687I$ $b = 0.224752 + 0.919301I$	$-6.01628 - 1.33617I$	$-13.03110 + 0.17445I$
$u = -0.796005 - 0.733148I$ $a = -0.766570 - 0.255687I$ $b = 0.224752 - 0.919301I$	$-6.01628 + 1.33617I$	$-13.03110 - 0.17445I$
$u = -0.728966 + 0.986295I$ $a = 0.721488 + 0.307914I$ $b = 0.124310 - 1.173370I$	$-5.24306 + 7.08493I$	$-11.12684 - 5.18429I$
$u = -0.728966 - 0.986295I$ $a = 0.721488 - 0.307914I$ $b = 0.124310 + 1.173370I$	$-5.24306 - 7.08493I$	$-11.12684 + 5.18429I$
$u = 0.512358$ $a = -1.21075$ $b = -0.317835$	-2.84338	-14.8000

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^{54}+14u^{53}+\cdots+12u+1)$
c_2	$((u-1)^9)(u^{54}-10u^{53}+\cdots+8u-1)$
c_3, c_7	$u^9(u^{54}-u^{53}+\cdots-1024u+512)$
c_4	$((u+1)^9)(u^{54}-10u^{53}+\cdots+8u-1)$
c_5	$(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot(u^{54}+2u^{53}+\cdots+220u-200)$
c_6	$(u^9+u^8+\cdots+u-1)(u^{54}+2u^{53}+\cdots+4u^2-1)$
c_8	$(u^9+u^8+\cdots-u-1)(u^{54}-2u^{53}+\cdots-2u+1)$
c_9	$(u^9+5u^8+12u^7+15u^6+9u^5-u^4-4u^3-2u^2+u+1)$ $\cdot(u^{54}-10u^{53}+\cdots+676u-61)$
c_{10}	$(u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot(u^{54}-18u^{53}+\cdots+8u+1)$
c_{11}	$(u^9-u^8+\cdots+u+1)(u^{54}+2u^{53}+\cdots+4u^2-1)$
c_{12}	$(u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot(u^{54}-18u^{53}+\cdots+8u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^{54}+62y^{53}+\cdots-72y+1)$
c_2, c_4	$((y-1)^9)(y^{54}-14y^{53}+\cdots-12y+1)$
c_3, c_7	$y^9(y^{54}-57y^{53}+\cdots-5767168y+262144)$
c_5	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{54}+2y^{53}+\cdots+341200y+40000)$
c_6, c_{11}	$(y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot(y^{54}+18y^{53}+\cdots-8y+1)$
c_8	$(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot(y^{54}+62y^{53}+\cdots-8y+1)$
c_9	$(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot(y^{54}+10y^{53}+\cdots-22900y+3721)$
c_{10}, c_{12}	$(y^9+7y^8+20y^7+25y^6+5y^5-15y^4+22y^2+13y-1)$ $\cdot(y^{54}+38y^{53}+\cdots-68y+1)$