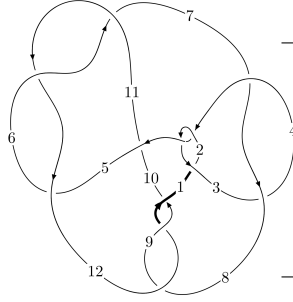
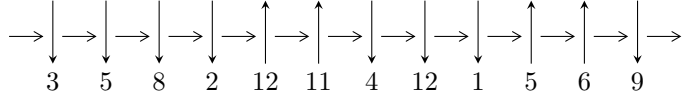


12n₀₁₉₆ (K12n₀₁₉₆)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 5.91245 \times 10^{25} u^{28} + 1.63252 \times 10^{26} u^{27} + \dots + 3.02573 \times 10^{27} b + 2.88635 \times 10^{27}, \\ - 5.15849 \times 10^{26} u^{28} - 3.76417 \times 10^{26} u^{27} + \dots + 1.81544 \times 10^{28} a - 1.59875 \times 10^{28}, \\ u^{29} + 2u^{28} + \dots + 24u + 8 \rangle$$

$$I_2^u = \langle -4a^2 u - 6a^2 + 8au + 17b + 12a - 2u - 20, 4a^3 - 6a^2 u - 8a^2 + 2au + u - 6, u^2 + 2 \rangle$$

$$I_3^u = \langle b + 1, 3a - 2u - 1, u^2 + u + 1 \rangle$$

$$I_1^v = \langle a, -v^2 + b - 3v + 1, v^3 + 2v^2 - 3v + 1 \rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 40 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } I_1^u = \langle 5.91 \times 10^{25} u^{28} + 1.63 \times 10^{26} u^{27} + \dots + 3.03 \times 10^{27} b + 2.89 \times 10^{27}, -5.16 \times 10^{26} u^{28} - 3.76 \times 10^{26} u^{27} + \dots + 1.82 \times 10^{28} a - 1.60 \times 10^{28}, u^{29} + 2u^{28} + \dots + 24u + 8 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_5 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_3 &= \begin{pmatrix} 0.0284146u^{28} + 0.0207342u^{27} + \dots - 6.48402u + 0.880639 \\ -0.0195406u^{28} - 0.0539545u^{27} + \dots - 0.120108u - 0.953934 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_2 &= \begin{pmatrix} 0.00887400u^{28} - 0.0332203u^{27} + \dots - 6.60412u - 0.0732946 \\ -0.0195406u^{28} - 0.0539545u^{27} + \dots - 0.120108u - 0.953934 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.00109364u^{28} + 0.00268100u^{27} + \dots - 2.31580u - 1.18662 \\ -0.0151700u^{28} - 0.0423430u^{27} + \dots + 2.22414u + 0.186334 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 0.0301055u^{28} + 0.0216495u^{27} + \dots - 8.00531u + 0.779890 \\ -0.0370743u^{28} - 0.0881628u^{27} + \dots + 0.425213u - 0.704192 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -u \\ u^3 + u \end{pmatrix} \\ a_7 &= \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -0.0385391u^{28} - 0.0826420u^{27} + \dots + 2.43382u - 0.756874 \\ 0.0271306u^{28} + 0.0472982u^{27} + \dots - 2.96732u - 0.287921 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -0.0385391u^{28} - 0.0826420u^{27} + \dots + 2.43382u - 0.756874 \\ 0.0222755u^{28} + 0.0429799u^{27} + \dots - 2.52548u - 0.243412 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} u^3 + 2u \\ -u^3 - u \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

$$\begin{aligned} \text{(iii) Cusp Shapes} &= -\frac{5380338557971956323782944785}{27231580801980091699413843348} u^{28} - \frac{382789047733408314358823614}{756432800055002547205940093} u^{27} + \\ &\dots - \frac{24975710409590861685346874876}{6807895200495022924853460837} u - \frac{79653205793763175879382867786}{6807895200495022924853460837} \end{aligned}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{29} + 24u^{28} + \dots - 533u + 81$
c_2, c_4	$u^{29} - 6u^{28} + \dots + 5u - 9$
c_3, c_7	$u^{29} + 2u^{28} + \dots + 36u - 36$
c_5, c_6, c_{11}	$u^{29} + 2u^{28} + \dots + 24u + 8$
c_8, c_9, c_{12}	$u^{29} + 5u^{28} + \dots + 371u - 49$
c_{10}	$u^{29} - 2u^{28} + \dots + 109624u + 17960$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{29} - 32y^{28} + \dots + 729751y - 6561$
c_2, c_4	$y^{29} - 24y^{28} + \dots - 533y - 81$
c_3, c_7	$y^{29} - 6y^{28} + \dots + 7416y - 1296$
c_5, c_6, c_{11}	$y^{29} + 42y^{28} + \dots + 1472y - 64$
c_8, c_9, c_{12}	$y^{29} - 39y^{28} + \dots + 313551y - 2401$
c_{10}	$y^{29} + 126y^{28} + \dots + 874175296y - 322561600$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.056486 + 1.108600I$ $a = 0.509763 + 0.504736I$ $b = 0.907095 - 0.525537I$	$-1.48252 + 4.21157I$	$-5.04918 - 7.08997I$
$u = 0.056486 - 1.108600I$ $a = 0.509763 - 0.504736I$ $b = 0.907095 + 0.525537I$	$-1.48252 - 4.21157I$	$-5.04918 + 7.08997I$
$u = -0.388139 + 1.131690I$ $a = 0.13323 + 1.59492I$ $b = -0.279564 - 0.842912I$	$-6.31420 - 2.62388I$	$-7.82173 + 3.53782I$
$u = -0.388139 - 1.131690I$ $a = 0.13323 - 1.59492I$ $b = -0.279564 + 0.842912I$	$-6.31420 + 2.62388I$	$-7.82173 - 3.53782I$
$u = -1.26121$ $a = -1.32815$ $b = 1.48540$	-8.96674	-10.0380
$u = 0.596916 + 1.218910I$ $a = -0.248187 + 0.135692I$ $b = 1.167880 + 0.296850I$	$-1.89970 + 1.08021I$	$-8.90087 + 2.30906I$
$u = 0.596916 - 1.218910I$ $a = -0.248187 - 0.135692I$ $b = 1.167880 - 0.296850I$	$-1.89970 - 1.08021I$	$-8.90087 - 2.30906I$
$u = 0.246173 + 0.558581I$ $a = 0.428232 - 0.225932I$ $b = 0.080951 + 0.316217I$	$-0.137288 + 1.167630I$	$-1.98849 - 5.87802I$
$u = 0.246173 - 0.558581I$ $a = 0.428232 + 0.225932I$ $b = 0.080951 - 0.316217I$	$-0.137288 - 1.167630I$	$-1.98849 + 5.87802I$
$u = 0.229637 + 1.393650I$ $a = -0.24130 - 1.45930I$ $b = -1.306470 + 0.114811I$	$-9.08630 + 0.60306I$	$-9.48302 + 0.55490I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.229637 - 1.393650I$ $a = -0.24130 + 1.45930I$ $b = -1.306470 - 0.114811I$	$-9.08630 - 0.60306I$	$-9.48302 - 0.55490I$
$u = -0.92622 + 1.09424I$ $a = -0.679131 - 1.154340I$ $b = 1.50364 + 0.34882I$	$-12.14260 - 7.09236I$	$-9.88548 + 4.43112I$
$u = -0.92622 - 1.09424I$ $a = -0.679131 + 1.154340I$ $b = 1.50364 - 0.34882I$	$-12.14260 + 7.09236I$	$-9.88548 - 4.43112I$
$u = 0.032332 + 0.523301I$ $a = -2.28494 + 0.79922I$ $b = -1.045540 - 0.191235I$	$-2.84144 - 0.79516I$	$-13.03610 - 2.36785I$
$u = 0.032332 - 0.523301I$ $a = -2.28494 - 0.79922I$ $b = -1.045540 + 0.191235I$	$-2.84144 + 0.79516I$	$-13.03610 + 2.36785I$
$u = -0.06536 + 1.54556I$ $a = 0.658215 - 0.546986I$ $b = -0.451198 + 0.592359I$	$-7.37261 + 1.38935I$	$-7.45295 - 4.42658I$
$u = -0.06536 - 1.54556I$ $a = 0.658215 + 0.546986I$ $b = -0.451198 - 0.592359I$	$-7.37261 - 1.38935I$	$-7.45295 + 4.42658I$
$u = 0.434195 + 0.049760I$ $a = -0.72855 - 1.30157I$ $b = 0.901341 + 0.657097I$	$1.84827 - 2.56654I$	$3.67854 + 0.07862I$
$u = 0.434195 - 0.049760I$ $a = -0.72855 + 1.30157I$ $b = 0.901341 - 0.657097I$	$1.84827 + 2.56654I$	$3.67854 - 0.07862I$
$u = -0.352396$ $a = 5.25680$ $b = -0.489012$	-2.50392	5.38240

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.210444$ $a = 3.27498$ $b = -0.852919$	-1.24667	-7.81580
$u = -0.31071 + 1.78442I$ $a = -0.039698 - 1.223290I$ $b = 1.49818 + 0.64361I$	$17.7563 - 12.2354I$	0
$u = -0.31071 - 1.78442I$ $a = -0.039698 + 1.223290I$ $b = 1.49818 - 0.64361I$	$17.7563 + 12.2354I$	0
$u = -0.14116 + 1.80910I$ $a = -0.144818 + 1.112790I$ $b = -0.015590 - 1.360440I$	$-16.9778 - 5.1847I$	0
$u = -0.14116 - 1.80910I$ $a = -0.144818 - 1.112790I$ $b = -0.015590 + 1.360440I$	$-16.9778 + 5.1847I$	0
$u = 0.04856 + 1.88123I$ $a = 0.226652 - 0.888720I$ $b = -1.55643 + 0.68836I$	$17.7608 + 2.1451I$	0
$u = 0.04856 - 1.88123I$ $a = 0.226652 + 0.888720I$ $b = -1.55643 - 0.68836I$	$17.7608 - 2.1451I$	0
$u = 0.09931 + 1.89084I$ $a = -0.024622 + 0.392844I$ $b = 1.52399 - 0.23863I$	$-13.8756 + 4.6395I$	0
$u = 0.09931 - 1.89084I$ $a = -0.024622 - 0.392844I$ $b = 1.52399 + 0.23863I$	$-13.8756 - 4.6395I$	0

$$\text{II. } I_2^u = \langle -4a^2u - 6a^2 + 8au + 17b + 12a - 2u - 20, 4a^3 - 6a^2u - 8a^2 + 2au + u - 6, u^2 + 2 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} a \\ 0.235294a^2u - 0.470588au + \dots - 0.705882a + 1.17647 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.235294a^2u - 0.470588au + \dots + 0.294118a + 1.17647 \\ 0.235294a^2u - 0.470588au + \dots - 0.705882a + 1.17647 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{2}u \\ 0.352941a^2u + 0.294118au + \dots + 0.941176a + 1.76471 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.411765a^2u + 0.823529au + \dots + 0.235294a - 0.0588235 \\ 0.117647a^2u + 0.764706au + \dots + 1.64706a - 0.411765 \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} \frac{1}{2}u \\ 0.352941a^2u + 0.294118au + \dots + 0.941176a + 1.76471 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} \frac{1}{2}u \\ 0.352941a^2u + 0.294118au + \dots + 0.941176a + 1.76471 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ -u \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{16}{17}a^2u + \frac{24}{17}a^2 - \frac{32}{17}au - \frac{48}{17}a + \frac{8}{17}u - \frac{124}{17}$$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$(y^3 + 3y^2 + 2y - 1)^2$
c_2, c_4	$(y^3 - y^2 + 2y - 1)^2$
c_5, c_6, c_{10} c_{11}	$(y + 2)^6$
c_8, c_9, c_{12}	$(y - 1)^6$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.414210I$		
$a = 0.520153 + 0.983610I$	$-3.55561 + 2.82812I$	$-8.49024 - 2.97945I$
$b = 0.877439 - 0.744862I$		
$u = 1.414210I$		
$a = -0.275030 - 0.506114I$	$-3.55561 - 2.82812I$	$-8.49024 + 2.97945I$
$b = 0.877439 + 0.744862I$		
$u = 1.414210I$		
$a = 1.75488 + 1.64382I$	-7.69319	$-15.0195 + 0.I$
$b = -0.754878$		
$u = -1.414210I$		
$a = 0.520153 - 0.983610I$	$-3.55561 - 2.82812I$	$-8.49024 + 2.97945I$
$b = 0.877439 + 0.744862I$		
$u = -1.414210I$		
$a = -0.275030 + 0.506114I$	$-3.55561 + 2.82812I$	$-8.49024 - 2.97945I$
$b = 0.877439 - 0.744862I$		
$u = -1.414210I$		
$a = 1.75488 - 1.64382I$	-7.69319	$-15.0195 + 0.I$
$b = -0.754878$		

$$\text{III. } I_3^u = \langle b + 1, 3a - 2u - 1, u^2 + u + 1 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} \frac{2}{3}u + \frac{1}{3} \\ -1 \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} \frac{2}{3}u - \frac{2}{3} \\ -1 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} \frac{2}{3}u + \frac{1}{3} \\ -1 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} -u \\ u + 2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u \\ u + 2 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -2u - 1 \\ u + 1 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $\frac{20}{3}u - 3$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u - 1)^2$
c_3, c_7	u^2
c_4	$(u + 1)^2$
c_5, c_6, c_{10} c_{12}	$u^2 + u + 1$
c_8, c_9, c_{11}	$u^2 - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y - 1)^2$
c_3, c_7	y^2
c_5, c_6, c_8 c_9, c_{10}, c_{11} c_{12}	$y^2 + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$		
$a = 0.577350I$	$-1.64493 - 2.02988I$	$-6.33333 + 5.77350I$
$b = -1.00000$		
$u = -0.500000 - 0.866025I$		
$a = -0.577350I$	$-1.64493 + 2.02988I$	$-6.33333 - 5.77350I$
$b = -1.00000$		

$$\text{IV. } I_1^v = \langle a, -v^2 + b - 3v + 1, v^3 + 2v^2 - 3v + 1 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0 \\ v^2 + 3v - 1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} v^2 + 3v - 1 \\ v^2 + 3v - 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} v^2 + 3v - 1 \\ -v^2 - 2v + 3 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2v^2 - 5v + 4 \\ -2v^2 - 5v + 3 \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} -v^2 - 3v + 1 \\ v^2 + 2v - 3 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -v^2 - 2v + 1 \\ v^2 + 2v - 3 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $8v^2 + 26v - 26$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3	$u^3 - u^2 + 2u - 1$
c_2	$u^3 + u^2 - 1$
c_4	$u^3 - u^2 + 1$
c_5, c_6, c_{10} c_{11}	u^3
c_7	$u^3 + u^2 + 2u + 1$
c_8, c_9	$(u - 1)^3$
c_{12}	$(u + 1)^3$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_7	$y^3 + 3y^2 + 2y - 1$
c_2, c_4	$y^3 - y^2 + 2y - 1$
c_5, c_6, c_{10} c_{11}	y^3
c_8, c_9, c_{12}	$(y - 1)^3$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.539798 + 0.182582I$ $a = 0$ $b = 0.877439 + 0.744862I$	$1.37919 - 2.82812I$	$-9.90089 + 6.32406I$
$v = 0.539798 - 0.182582I$ $a = 0$ $b = 0.877439 - 0.744862I$	$1.37919 + 2.82812I$	$-9.90089 - 6.32406I$
$v = -3.07960$ $a = 0$ $b = -0.754878$	-2.75839	-30.1980

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^2)(u^3-u^2+2u-1)^3(u^{29}+24u^{28}+\dots-533u+81)$
c_2	$((u-1)^2)(u^3+u^2-1)^3(u^{29}-6u^{28}+\dots+5u-9)$
c_3	$u^2(u^3-u^2+2u-1)(u^3+u^2+2u+1)^2(u^{29}+2u^{28}+\dots+36u-36)$
c_4	$((u+1)^2)(u^3-u^2+1)^3(u^{29}-6u^{28}+\dots+5u-9)$
c_5, c_6	$u^3(u^2+2)^3(u^2+u+1)(u^{29}+2u^{28}+\dots+24u+8)$
c_7	$u^2(u^3-u^2+2u-1)^2(u^3+u^2+2u+1)(u^{29}+2u^{28}+\dots+36u-36)$
c_8, c_9	$((u-1)^3)(u+1)^6(u^2-u+1)(u^{29}+5u^{28}+\dots+371u-49)$
c_{10}	$u^3(u^2+2)^3(u^2+u+1)(u^{29}-2u^{28}+\dots+109624u+17960)$
c_{11}	$u^3(u^2+2)^3(u^2-u+1)(u^{29}+2u^{28}+\dots+24u+8)$
c_{12}	$((u-1)^6)(u+1)^3(u^2+u+1)(u^{29}+5u^{28}+\dots+371u-49)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y - 1)^2)(y^3 + 3y^2 + 2y - 1)^3(y^{29} - 32y^{28} + \dots + 729751y - 6561)$
c_2, c_4	$((y - 1)^2)(y^3 - y^2 + 2y - 1)^3(y^{29} - 24y^{28} + \dots - 533y - 81)$
c_3, c_7	$y^2(y^3 + 3y^2 + 2y - 1)^3(y^{29} - 6y^{28} + \dots + 7416y - 1296)$
c_5, c_6, c_{11}	$y^3(y + 2)^6(y^2 + y + 1)(y^{29} + 42y^{28} + \dots + 1472y - 64)$
c_8, c_9, c_{12}	$((y - 1)^9)(y^2 + y + 1)(y^{29} - 39y^{28} + \dots + 313551y - 2401)$
c_{10}	$y^3(y + 2)^6(y^2 + y + 1)$ $\cdot (y^{29} + 126y^{28} + \dots + 874175296y - 322561600)$