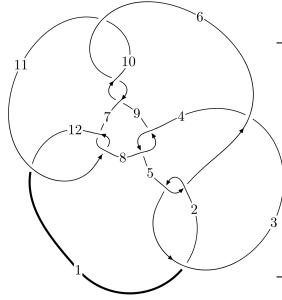
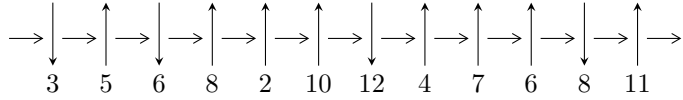


12n<sub>0051</sub> (K12n<sub>0051</sub>)



A knot diagram<sup>1</sup>

**Linearized knot diagram**



**Solving Sequence**

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

**Ideals for irreducible components<sup>2</sup> of  $X_{\text{par}}$**

$$I_1^u = \langle -1.54023 \times 10^{25} u^{21} - 4.36397 \times 10^{25} u^{20} + \dots + 2.35281 \times 10^{27} b - 1.19412 \times 10^{26}, \\ 4.19615 \times 10^{28} u^{21} + 1.33730 \times 10^{29} u^{20} + \dots + 1.37404 \times 10^{30} a + 5.83977 \times 10^{30}, \\ u^{22} + 3u^{21} + \dots - 160u + 73 \rangle$$

$$I_2^u = \langle b, 6u^3 a - 4u^2 a - 3u^3 + 4a^2 + 14au - 2u^2 - 6a - 7u - 7, u^4 - u^3 + 3u^2 - 2u + 1 \rangle$$

$$I_3^u = \langle -a^4 u + a^3 u + a^3 - 2a^2 + 4au + 4b - 4a - 4u, a^5 + a^4 u - a^4 - 2a^3 u - 4a^2 u - 4a^2 + 4a - 4u + 4, u^2 + 1 \rangle$$

\* 3 irreducible components of  $\dim_{\mathbb{C}} = 0$ , with total 40 representations.

<sup>1</sup>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>).

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

$$\text{I. } I_1^u = \langle -1.54 \times 10^{25} u^{21} - 4.36 \times 10^{25} u^{20} + \dots + 2.35 \times 10^{27} b - 1.19 \times 10^{26}, 4.20 \times 10^{28} u^{21} + 1.34 \times 10^{29} u^{20} + \dots + 1.37 \times 10^{30} a + 5.84 \times 10^{30}, u^{22} + 3u^{21} + \dots - 160u + 73 \rangle$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -0.0305388u^{21} - 0.0973265u^{20} + \dots - 6.20155u - 4.25007 \\ 0.00654633u^{21} + 0.0185480u^{20} + \dots + 4.03131u + 0.0507530 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.0269488u^{21} - 0.0862650u^{20} + \dots - 5.94433u - 3.75869 \\ 0.00399982u^{21} + 0.0101440u^{20} + \dots + 3.98951u - 0.419348 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0111557u^{21} - 0.0331545u^{20} + \dots - 11.4392u + 1.82405 \\ 0.00209278u^{21} + 0.00628667u^{20} + \dots + 2.38388u - 0.320958 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -0.0325563u^{21} - 0.0995247u^{20} + \dots - 12.3684u - 1.68756 \\ 0.00662300u^{21} + 0.0176776u^{20} + \dots + 5.55048u - 0.614116 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.00503747u^{21} + 0.0176554u^{20} + \dots + 0.745076u + 3.13839 \\ -0.000640784u^{21} - 0.00237253u^{20} + \dots - 0.108742u - 0.457982 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.0116342u^{21} - 0.0404516u^{20} + \dots + 5.25864u - 5.57795 \\ 0.000768008u^{21} + 0.00322339u^{20} + \dots + 0.588075u + 0.675650 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.00471751u^{21} - 0.0164802u^{20} + \dots - 0.689358u - 2.34200 \\ 0.000443931u^{21} + 0.00178731u^{20} + \dots + 0.0810747u + 0.491670 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes =  $0.0299967u^{21} + 0.106465u^{20} + \dots - 19.9627u + 12.9465$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
$c_1$	$u^{22} + 19u^{21} + \dots + 79u + 16$
$c_2, c_5$	$u^{22} + 7u^{21} + \dots + 35u + 4$
$c_3$	$u^{22} - 16u^{21} + \dots + 25000u + 3104$
$c_4, c_8$	$u^{22} - u^{21} + \dots + 1536u + 2048$
$c_6, c_9, c_{10}$	$u^{22} + 3u^{21} + \dots - 160u + 73$
$c_7, c_{11}$	$u^{22} + 3u^{21} + \dots + 182u + 73$
$c_{12}$	$u^{22} + 7u^{21} + \dots - 67032u + 5329$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1$	$y^{22} - 25y^{21} + \dots + 179903y + 256$
$c_2, c_5$	$y^{22} + 19y^{21} + \dots + 79y + 16$
$c_3$	$y^{22} - 78y^{21} + \dots + 78714048y + 9634816$
$c_4, c_8$	$y^{22} + 91y^{21} + \dots + 30670848y + 4194304$
$c_6, c_9, c_{10}$	$y^{22} + 45y^{21} + \dots + 149016y + 5329$
$c_7, c_{11}$	$y^{22} - 7y^{21} + \dots + 67032y + 5329$
$c_{12}$	$y^{22} + 85y^{21} + \dots + 2794246372y + 28398241$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.166885 + 0.855784I$		
$a = 0.884204 - 0.564449I$	$-1.86083 + 1.88410I$	$-4.29628 - 4.39442I$
$b = -0.685307 - 0.431142I$		
$u = 0.166885 - 0.855784I$		
$a = 0.884204 + 0.564449I$	$-1.86083 - 1.88410I$	$-4.29628 + 4.39442I$
$b = -0.685307 + 0.431142I$		
$u = 1.245170 + 0.161308I$		
$a = -0.584895 + 0.469137I$	$-3.01876 + 2.75600I$	$1.05384 - 1.99167I$
$b = 0.88430 - 1.76284I$		
$u = 1.245170 - 0.161308I$		
$a = -0.584895 - 0.469137I$	$-3.01876 - 2.75600I$	$1.05384 + 1.99167I$
$b = 0.88430 + 1.76284I$		
$u = 0.065911 + 1.393150I$		
$a = -0.167886 + 0.219714I$	$-7.41484 + 5.99413I$	$-4.98068 - 7.65331I$
$b = 0.208154 + 0.992360I$		
$u = 0.065911 - 1.393150I$		
$a = -0.167886 - 0.219714I$	$-7.41484 - 5.99413I$	$-4.98068 + 7.65331I$
$b = 0.208154 - 0.992360I$		
$u = -0.147428 + 0.530014I$		
$a = 2.56324 - 1.19415I$	$0.18307 - 2.82080I$	$2.85537 - 1.68871I$
$b = -0.391902 - 0.411319I$		
$u = -0.147428 - 0.530014I$		
$a = 2.56324 + 1.19415I$	$0.18307 + 2.82080I$	$2.85537 + 1.68871I$
$b = -0.391902 + 0.411319I$		
$u = 0.309359 + 0.401971I$		
$a = -0.508079 - 0.818004I$	$0.445026 + 1.231770I$	$4.87220 - 5.67709I$
$b = 0.193284 + 0.440196I$		
$u = 0.309359 - 0.401971I$		
$a = -0.508079 + 0.818004I$	$0.445026 - 1.231770I$	$4.87220 + 5.67709I$
$b = 0.193284 - 0.440196I$		

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.14190 + 1.59059I$ $a = -0.104582 - 0.310705I$ $b = -0.841835 - 0.832729I$	$-5.61868 + 1.54212I$	$1.66178 - 2.03716I$
$u = -0.14190 - 1.59059I$ $a = -0.104582 + 0.310705I$ $b = -0.841835 + 0.832729I$	$-5.61868 - 1.54212I$	$1.66178 + 2.03716I$
$u = -0.009993 + 0.350116I$ $a = -3.01267 - 0.71642I$ $b = 0.469397 + 0.461238I$	$0.96093 + 1.37462I$	$8.72525 - 4.65494I$
$u = -0.009993 - 0.350116I$ $a = -3.01267 + 0.71642I$ $b = 0.469397 - 0.461238I$	$0.96093 - 1.37462I$	$8.72525 + 4.65494I$
$u = -0.69231 + 1.86047I$ $a = -0.585229 - 1.015730I$ $b = 1.41273 - 1.99234I$	$15.9166 - 13.0727I$	$0.81219 + 5.19676I$
$u = -0.69231 - 1.86047I$ $a = -0.585229 + 1.015730I$ $b = 1.41273 + 1.99234I$	$15.9166 + 13.0727I$	$0.81219 - 5.19676I$
$u = -0.61577 + 2.17742I$ $a = 0.394124 + 0.984688I$ $b = -1.03067 + 2.69186I$	$19.2619 - 5.9056I$	$2.16347 + 1.69823I$
$u = -0.61577 - 2.17742I$ $a = 0.394124 - 0.984688I$ $b = -1.03067 - 2.69186I$	$19.2619 + 5.9056I$	$2.16347 - 1.69823I$
$u = -1.57086 + 2.18266I$ $a = 0.515590 + 0.201211I$ $b = 1.02473 + 4.03132I$	$-13.72130 - 3.06559I$	0
$u = -1.57086 - 2.18266I$ $a = 0.515590 - 0.201211I$ $b = 1.02473 - 4.03132I$	$-13.72130 + 3.06559I$	0

Solutions to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.10906 + 2.96605I$	$12.96110 + 1.49730I$	0
$a = -0.102719 - 0.793534I$		
$b = -0.74289 - 4.42273I$		
$u = -0.10906 - 2.96605I$	$12.96110 - 1.49730I$	0
$a = -0.102719 + 0.793534I$		
$b = -0.74289 + 4.42273I$		

$$\text{II. } I_2^u = \langle b, 6u^3a - 3u^3 + \dots - 6a - 7, u^4 - u^3 + 3u^2 - 2u + 1 \rangle$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} u^2 + 1 \\ -u^3 + u^2 - 2u + 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^3a - 2u^2a + 2au \\ u^3a - 2u^2a + au \end{pmatrix}$$

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

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

$$a_{12} = \begin{pmatrix} u^3 + 2u \\ -u^3 + u^2 - 2u + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^3a - 2u^2a + \frac{3}{2}u^3 + 2au - u^2 + \frac{7}{2}u - \frac{3}{2} \\ u^3a - 2u^2a + au \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ -u^3 - u \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{9}{2}u^3a - 5u^2a - \frac{19}{4}u^3 + \frac{21}{2}au + \frac{7}{2}u^2 - \frac{7}{2}a - \frac{55}{4}u + \frac{17}{4}$$



(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1, c_2, c_3$ $c_5$	$(y^2 + y + 1)^4$
$c_4, c_8$	$y^8$
$c_6, c_9, c_{10}$ $c_{12}$	$(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$
$c_7, c_{11}$	$(y^4 + y^3 + 3y^2 + 2y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_2^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.395123 + 0.506844I$ $a = -1.13839 - 1.09665I$ $b = 0$	$0.21101 + 3.44499I$	$3.71851 - 10.46973I$
$u = 0.395123 + 0.506844I$ $a = 1.51892 - 0.43755I$ $b = 0$	$0.211005 - 0.614778I$	$1.372162 - 0.328352I$
$u = 0.395123 - 0.506844I$ $a = -1.13839 + 1.09665I$ $b = 0$	$0.21101 - 3.44499I$	$3.71851 + 10.46973I$
$u = 0.395123 - 0.506844I$ $a = 1.51892 + 0.43755I$ $b = 0$	$0.211005 + 0.614778I$	$1.372162 + 0.328352I$
$u = 0.10488 + 1.55249I$ $a = -0.435815 + 0.100890I$ $b = 0$	$-6.79074 + 5.19385I$	$0.529613 - 1.243149I$
$u = 0.10488 + 1.55249I$ $a = 0.305281 + 0.326982I$ $b = 0$	$-6.79074 + 1.13408I$	$-4.49529 - 1.20873I$
$u = 0.10488 - 1.55249I$ $a = -0.435815 - 0.100890I$ $b = 0$	$-6.79074 - 5.19385I$	$0.529613 + 1.243149I$
$u = 0.10488 - 1.55249I$ $a = 0.305281 - 0.326982I$ $b = 0$	$-6.79074 - 1.13408I$	$-4.49529 + 1.20873I$

$$\text{III. } I_3^u = \langle -a^4u + a^3u + \cdots - 2a^2 - 4a, a^4u - 2a^3u + \cdots + 4a + 4, u^2 + 1 \rangle$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} a \\ \frac{1}{4}a^4u - \frac{1}{4}a^3u + \cdots + \frac{1}{2}a^2 + a \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -\frac{1}{4}a^4u + \frac{1}{4}a^3u + \cdots + \frac{1}{4}a^3 - \frac{1}{2}a^2 \\ \frac{1}{4}a^4u - \frac{1}{4}a^3u + \cdots + \frac{1}{2}a^2 + a \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u \\ -\frac{1}{2}a^3u + a^2u + \cdots + \frac{1}{2}a - 3 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} \frac{1}{4}a^3u - \frac{1}{2}a^2u + \cdots - \frac{1}{4}a^3 + 1 \\ -\frac{1}{2}a^4u + \frac{3}{4}a^3u + \cdots - 2a^2 - a \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -\frac{1}{4}a^4u + \frac{1}{2}a^3u + \cdots - \frac{1}{2}a + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -\frac{1}{2}a^4u + \frac{1}{4}a^3u + \cdots - 2a^2 - 1 \\ \frac{1}{2}a^4u - \frac{3}{4}a^3u + \cdots + 2a^2 + \frac{1}{2}a \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ -\frac{1}{4}a^4u + \frac{1}{2}a^3u + \cdots - a^2 - \frac{1}{2}a \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = a^4 + 2a^3u - 2a^3 - 6a^2u + 8$$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
$c_1$	$(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2$
$c_2, c_5$	$(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$
$c_3$	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^2$
$c_4, c_8$	$(y^5 + 5y^4 + 8y^3 + 3y^2 - y + 1)^2$
$c_6, c_7, c_9$ $c_{10}, c_{11}$	$(y + 1)^{10}$
$c_{12}$	$(y - 1)^{10}$

(vi) Complex Volumes and Cusp Shapes

Solutions to $I_3^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.000000I$ $a = -0.794743 + 0.582062I$ $b = 0.21917 + 1.41878I$	$-5.87256 - 4.40083I$	$-0.74431 + 3.49859I$
$u = 1.000000I$ $a = -0.582062 + 0.794743I$ $b = -0.21917 + 1.41878I$	$-5.87256 + 4.40083I$	$-0.74431 - 3.49859I$
$u = 1.000000I$ $a = 0.821196 - 0.821196I$ $b = -1.217740I$	$-2.40108$	$2.51886 + 0.I$
$u = 1.000000I$ $a = 2.15793 + 0.60232I$ $b = -0.549911 - 0.309916I$	$-0.32910 + 1.53058I$	$3.48489 - 4.43065I$
$u = 1.000000I$ $a = -0.60232 - 2.15793I$ $b = 0.549911 - 0.309916I$	$-0.32910 - 1.53058I$	$3.48489 + 4.43065I$
$u = -1.000000I$ $a = -0.582062 - 0.794743I$ $b = -0.21917 - 1.41878I$	$-5.87256 + 4.40083I$	$-0.74431 - 3.49859I$
$u = -1.000000I$ $a = -0.794743 - 0.582062I$ $b = 0.21917 - 1.41878I$	$-5.87256 - 4.40083I$	$-0.74431 + 3.49859I$
$u = -1.000000I$ $a = 0.821196 + 0.821196I$ $b = 1.217740I$	$-2.40108$	$2.51886 + 0.I$
$u = -1.000000I$ $a = 2.15793 - 0.60232I$ $b = -0.549911 + 0.309916I$	$-0.32910 - 1.53058I$	$3.48489 + 4.43065I$
$u = -1.000000I$ $a = -0.60232 + 2.15793I$ $b = 0.549911 + 0.309916I$	$-0.32910 + 1.53058I$	$3.48489 - 4.43065I$

#### IV. u-Polynomials

Crossings	u-Polynomials at each crossing
$c_1$	$(u^2 - u + 1)^4(u^5 - 3u^4 + 4u^3 - u^2 - u + 1)^2 \cdot (u^{22} + 19u^{21} + \dots + 79u + 16)$
$c_2$	$((u^2 + u + 1)^4)(u^5 - u^4 + \dots + u - 1)^2(u^{22} + 7u^{21} + \dots + 35u + 4)$
$c_3$	$(u^2 - u + 1)^4(u^5 + u^4 - 2u^3 - u^2 + u - 1)^2 \cdot (u^{22} - 16u^{21} + \dots + 25000u + 3104)$
$c_4, c_8$	$u^8(u^{10} + 5u^8 + \dots - u^2 + 1)(u^{22} - u^{21} + \dots + 1536u + 2048)$
$c_5$	$((u^2 - u + 1)^4)(u^5 + u^4 + \dots + u + 1)^2(u^{22} + 7u^{21} + \dots + 35u + 4)$
$c_6$	$((u^2 + 1)^5)(u^4 + u^3 + 3u^2 + 2u + 1)^2(u^{22} + 3u^{21} + \dots - 160u + 73)$
$c_7$	$((u^2 + 1)^5)(u^4 + u^3 + u^2 + 1)^2(u^{22} + 3u^{21} + \dots + 182u + 73)$
$c_9, c_{10}$	$((u^2 + 1)^5)(u^4 - u^3 + 3u^2 - 2u + 1)^2(u^{22} + 3u^{21} + \dots - 160u + 73)$
$c_{11}$	$((u^2 + 1)^5)(u^4 - u^3 + u^2 + 1)^2(u^{22} + 3u^{21} + \dots + 182u + 73)$
$c_{12}$	$(u - 1)^{10}(u^4 - u^3 + 3u^2 - 2u + 1)^2 \cdot (u^{22} + 7u^{21} + \dots - 67032u + 5329)$



### V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
$c_1$	$(y^2 + y + 1)^4(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2$ $\cdot (y^{22} - 25y^{21} + \dots + 179903y + 256)$
$c_2, c_5$	$(y^2 + y + 1)^4(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)^2$ $\cdot (y^{22} + 19y^{21} + \dots + 79y + 16)$
$c_3$	$(y^2 + y + 1)^4(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)^2$ $\cdot (y^{22} - 78y^{21} + \dots + 78714048y + 9634816)$
$c_4, c_8$	$y^8(y^5 + 5y^4 + 8y^3 + 3y^2 - y + 1)^2$ $\cdot (y^{22} + 91y^{21} + \dots + 30670848y + 4194304)$
$c_6, c_9, c_{10}$	$(y + 1)^{10}(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$ $\cdot (y^{22} + 45y^{21} + \dots + 149016y + 5329)$
$c_7, c_{11}$	$(y + 1)^{10}(y^4 + y^3 + 3y^2 + 2y + 1)^2$ $\cdot (y^{22} - 7y^{21} + \dots + 67032y + 5329)$
$c_{12}$	$(y - 1)^{10}(y^4 + 5y^3 + 7y^2 + 2y + 1)^2$ $\cdot (y^{22} + 85y^{21} + \dots + 2794246372y + 28398241)$