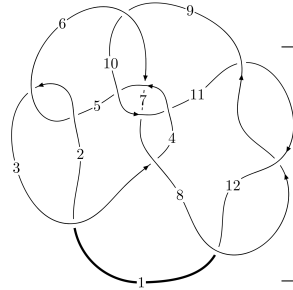
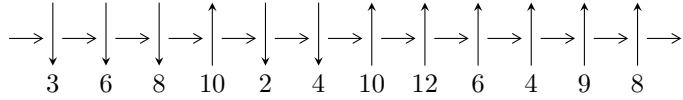


12n₀₃₂₃ (K12n₀₃₂₃)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -5.93292 \times 10^{96} u^{38} - 8.20410 \times 10^{95} u^{37} + \dots + 4.97642 \times 10^{96} b - 4.64235 \times 10^{97}, \\ -1.86317 \times 10^{97} u^{38} - 7.56639 \times 10^{95} u^{37} + \dots + 4.97642 \times 10^{96} a - 1.47890 \times 10^{98}, \\ u^{39} - 27u^{37} + \dots + 23u - 1 \rangle$$

$$I_2^u = \langle 193u^{12} + 451u^{11} + \dots + b + 265, -473u^{12} - 1171u^{11} + \dots + a - 874, \\ u^{13} + 3u^{12} - u^{11} - 13u^{10} - 22u^9 - 18u^8 + 21u^7 + 83u^6 + 131u^5 + 138u^4 + 97u^3 + 42u^2 + 10u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 52 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.

$$\text{I. } I_1^u = \langle -5.93 \times 10^{96} u^{38} - 8.20 \times 10^{95} u^{37} + \dots + 4.98 \times 10^{96} b - 4.64 \times 10^{97}, -1.86 \times 10^{97} u^{38} - 7.57 \times 10^{95} u^{37} + \dots + 4.98 \times 10^{96} a - 1.48 \times 10^{98}, u^{39} - 27u^{37} + \dots + 23u - 1 \rangle$$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 3.74399u^{38} + 0.152045u^{37} + \dots - 535.809u + 29.7183 \\ 1.19221u^{38} + 0.164860u^{37} + \dots - 144.637u + 9.32870 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -12.4725u^{38} - 2.14316u^{37} + \dots + 1137.22u - 63.9305 \\ 0.330558u^{38} + 0.0519417u^{37} + \dots - 31.6927u + 2.63188 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 3.74399u^{38} + 0.152045u^{37} + \dots - 535.809u + 29.7183 \\ 1.24585u^{38} + 0.181271u^{37} + \dots - 144.884u + 9.17665 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -8.97456u^{38} - 1.43150u^{37} + \dots + 889.416u - 63.1649 \\ -1.50003u^{38} - 0.226969u^{37} + \dots + 156.223u - 8.24024 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -10.4746u^{38} - 1.65847u^{37} + \dots + 1045.64u - 71.4051 \\ -1.50003u^{38} - 0.226969u^{37} + \dots + 156.223u - 8.24024 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -31.1624u^{38} - 4.81610u^{37} + \dots + 3104.14u - 177.973 \\ -0.404984u^{38} - 0.0547518u^{37} + \dots + 61.2052u - 2.70494 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -4.84811u^{38} - 0.726842u^{37} + \dots + 500.726u - 13.4811 \\ 2.04459u^{38} + 0.303981u^{37} + \dots - 209.069u + 11.7457 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 2.55178u^{38} - 0.0128147u^{37} + \dots - 391.172u + 20.3896 \\ 1.19221u^{38} + 0.164860u^{37} + \dots - 144.637u + 9.32870 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 11.7457u^{38} + 2.04459u^{37} + \dots - 1039.19u + 61.0824 \\ 0.0960919u^{38} + 0.00947475u^{37} + \dots - 14.9880u + 0.00924794 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $2.40504u^{38} + 0.306842u^{37} + \dots - 347.511u + 22.5697$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{39} + 16u^{38} + \dots + 329u + 1$
c_2, c_5	$u^{39} + 4u^{38} + \dots + 15u - 1$
c_3	$u^{39} + 10u^{37} + \dots + 249u - 171$
c_4, c_{10}	$u^{39} + u^{38} + \dots + 7u - 1$
c_6	$u^{39} - 27u^{37} + \dots + 23u - 1$
c_7	$u^{39} + 2u^{38} + \dots - 4549u - 567$
c_8, c_{11}, c_{12}	$u^{39} + 4u^{38} + \dots - 79u - 29$
c_9	$u^{39} + 17u^{37} + \dots - 4121u - 2447$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{39} + 24y^{38} + \dots + 99345y - 1$
c_2, c_5	$y^{39} - 16y^{38} + \dots + 329y - 1$
c_3	$y^{39} + 20y^{38} + \dots - 233145y - 29241$
c_4, c_{10}	$y^{39} + 49y^{38} + \dots - 47y - 1$
c_6	$y^{39} - 54y^{38} + \dots + 67y - 1$
c_7	$y^{39} + 40y^{38} + \dots + 13389307y - 321489$
c_8, c_{11}, c_{12}	$y^{39} + 22y^{38} + \dots - 13189y - 841$
c_9	$y^{39} + 34y^{38} + \dots - 55732411y - 5987809$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.994299 + 0.272414I$		
$a = 0.463680 - 0.927259I$	$-0.629315 + 0.697668I$	$-0.69777 + 1.96847I$
$b = 1.018090 - 0.678656I$		
$u = -0.994299 - 0.272414I$		
$a = 0.463680 + 0.927259I$	$-0.629315 - 0.697668I$	$-0.69777 - 1.96847I$
$b = 1.018090 + 0.678656I$		
$u = 0.649416 + 0.545046I$		
$a = 0.543557 + 0.859256I$	$-0.04361 + 5.03289I$	$-0.70677 - 5.74773I$
$b = 0.932275 + 0.703931I$		
$u = 0.649416 - 0.545046I$		
$a = 0.543557 - 0.859256I$	$-0.04361 - 5.03289I$	$-0.70677 + 5.74773I$
$b = 0.932275 - 0.703931I$		
$u = -1.003940 + 0.692341I$		
$a = 0.328055 - 0.842205I$	$-1.32978 - 3.67485I$	0
$b = -1.78302 - 0.03484I$		
$u = -1.003940 - 0.692341I$		
$a = 0.328055 + 0.842205I$	$-1.32978 + 3.67485I$	0
$b = -1.78302 + 0.03484I$		
$u = -0.639274 + 0.192301I$		
$a = 0.756843 - 0.681921I$	$-1.39152 + 0.61829I$	$-4.65215 - 1.06818I$
$b = 0.300034 - 0.398633I$		
$u = -0.639274 - 0.192301I$		
$a = 0.756843 + 0.681921I$	$-1.39152 - 0.61829I$	$-4.65215 + 1.06818I$
$b = 0.300034 + 0.398633I$		
$u = 0.593939 + 0.218894I$		
$a = 0.976981 + 0.875107I$	$1.53232 - 0.33929I$	$2.22376 + 1.90694I$
$b = -1.005710 + 0.276370I$		
$u = 0.593939 - 0.218894I$		
$a = 0.976981 - 0.875107I$	$1.53232 + 0.33929I$	$2.22376 - 1.90694I$
$b = -1.005710 - 0.276370I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.09219 + 1.41774I$ $a = 0.1177060 + 0.0003338I$ $b = -0.544510 - 0.762381I$	$3.32998 + 1.36180I$	0
$u = 0.09219 - 1.41774I$ $a = 0.1177060 - 0.0003338I$ $b = -0.544510 + 0.762381I$	$3.32998 - 1.36180I$	0
$u = -1.58355 + 0.07109I$ $a = 0.242255 + 1.000940I$ $b = 0.550049 + 1.295150I$	$-2.17716 + 0.58502I$	0
$u = -1.58355 - 0.07109I$ $a = 0.242255 - 1.000940I$ $b = 0.550049 - 1.295150I$	$-2.17716 - 0.58502I$	0
$u = 1.52238 + 0.49770I$ $a = -0.599371 - 0.810262I$ $b = 0.202320 - 1.285620I$	$-8.76356 + 1.01188I$	0
$u = 1.52238 - 0.49770I$ $a = -0.599371 + 0.810262I$ $b = 0.202320 + 1.285620I$	$-8.76356 - 1.01188I$	0
$u = -0.45538 + 1.56426I$ $a = -0.0753063 - 0.0530697I$ $b = -0.505804 + 0.964655I$	$2.41500 + 4.97539I$	0
$u = -0.45538 - 1.56426I$ $a = -0.0753063 + 0.0530697I$ $b = -0.505804 - 0.964655I$	$2.41500 - 4.97539I$	0
$u = -0.164690 + 0.303209I$ $a = 0.604983 + 0.898851I$ $b = 0.880121 + 0.762617I$	$-4.06684 + 2.90659I$	$6.73557 + 0.48460I$
$u = -0.164690 - 0.303209I$ $a = 0.604983 - 0.898851I$ $b = 0.880121 - 0.762617I$	$-4.06684 - 2.90659I$	$6.73557 - 0.48460I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.65134 + 0.17017I$ $a = 0.210060 - 1.091670I$ $b = 0.59401 - 1.30121I$	$-2.82025 - 6.80896I$	0
$u = 1.65134 - 0.17017I$ $a = 0.210060 + 1.091670I$ $b = 0.59401 + 1.30121I$	$-2.82025 + 6.80896I$	0
$u = 0.316011$ $a = 1.69045$ $b = -0.597495$	1.11789	11.2670
$u = 1.78797 + 0.23546I$ $a = -0.175928 - 1.026470I$ $b = 0.426419 - 1.281700I$	$-9.84094 - 3.14577I$	0
$u = 1.78797 - 0.23546I$ $a = -0.175928 + 1.026470I$ $b = 0.426419 + 1.281700I$	$-9.84094 + 3.14577I$	0
$u = 0.147459 + 0.018240I$ $a = 8.93744 + 0.12975I$ $b = -0.052132 - 0.818099I$	$2.82165 + 0.44220I$	$0.165551 - 1.251212I$
$u = 0.147459 - 0.018240I$ $a = 8.93744 - 0.12975I$ $b = -0.052132 + 0.818099I$	$2.82165 - 0.44220I$	$0.165551 + 1.251212I$
$u = 0.0757690 + 0.1010380I$ $a = -9.82475 + 6.73299I$ $b = 0.096930 - 1.077780I$	$1.58306 + 6.33307I$	$-2.17277 - 5.35202I$
$u = 0.0757690 - 0.1010380I$ $a = -9.82475 - 6.73299I$ $b = 0.096930 + 1.077780I$	$1.58306 - 6.33307I$	$-2.17277 + 5.35202I$
$u = -1.81753 + 0.76879I$ $a = -0.361839 + 0.599956I$ $b = 0.192205 + 1.129990I$	$-8.14778 + 2.96891I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.81753 - 0.76879I$		
$a = -0.361839 - 0.599956I$	$-8.14778 - 2.96891I$	0
$b = 0.192205 - 1.129990I$		
$u = 1.99569 + 0.16593I$		
$a = 0.098834 + 0.938233I$	$-12.47920 - 1.55057I$	0
$b = 0.13027 + 2.53503I$		
$u = 1.99569 - 0.16593I$		
$a = 0.098834 - 0.938233I$	$-12.47920 + 1.55057I$	0
$b = 0.13027 - 2.53503I$		
$u = -1.97927 + 0.41282I$		
$a = 0.025347 - 0.879507I$	$-4.36641 + 6.38323I$	0
$b = -0.64583 - 1.82989I$		
$u = -1.97927 - 0.41282I$		
$a = 0.025347 + 0.879507I$	$-4.36641 - 6.38323I$	0
$b = -0.64583 + 1.82989I$		
$u = 2.03401 + 0.41923I$		
$a = -0.017030 + 0.900973I$	$-6.3597 - 13.3871I$	0
$b = -0.90609 + 1.73968I$		
$u = 2.03401 - 0.41923I$		
$a = -0.017030 - 0.900973I$	$-6.3597 + 13.3871I$	0
$b = -0.90609 - 1.73968I$		
$u = -2.07024 + 0.28134I$		
$a = -0.096745 + 0.760848I$	$-9.04262 + 0.68757I$	0
$b = 0.419131 + 1.090140I$		
$u = -2.07024 - 0.28134I$		
$a = -0.096745 - 0.760848I$	$-9.04262 - 0.68757I$	0
$b = 0.419131 - 1.090140I$		

$$\text{II. } I_2^u = \langle 193u^{12} + 451u^{11} + \dots + b + 265, -473u^{12} - 1171u^{11} + \dots + a - 874, u^{13} + 3u^{12} + \dots + 10u + 1 \rangle$$

(i) Arc colorings

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

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

$$a_7 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 473u^{12} + 1171u^{11} + \dots + 7192u + 874 \\ -193u^{12} - 451u^{11} + \dots - 2345u - 265 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -8u^{12} - 24u^{11} + \dots - 273u - 46 \\ 512u^{12} + 1280u^{11} + \dots + 8192u + 1023 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 473u^{12} + 1171u^{11} + \dots + 7192u + 874 \\ -320u^{12} - 768u^{11} + \dots - 4352u - 513 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -47u^{12} - 124u^{11} + \dots - 1013u - 142 \\ -u^{12} - 3u^{11} + \dots - 42u - 9 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -48u^{12} - 127u^{11} + \dots - 1055u - 151 \\ -u^{12} - 3u^{11} + \dots - 42u - 9 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 122u^{12} + 318u^{11} + \dots + 2113u + 256 \\ 30u^{12} + 83u^{11} + \dots + 719u + 103 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -103u^{12} - 278u^{11} + \dots - 2217u - 303 \\ -8u^{12} - 23u^{11} + \dots - 239u - 39 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 666u^{12} + 1622u^{11} + \dots + 9537u + 1139 \\ -193u^{12} - 451u^{11} + \dots - 2345u - 265 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -39u^{12} - 109u^{11} + \dots - 1000u - 151 \\ 192u^{12} + 512u^{11} + \dots + 3840u + 511 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = 1726u^{12} + 4212u^{11} - 4090u^{10} - 20161u^9 - 26665u^8 - 16081u^7 + 45309u^6 + 117921u^5 + 159920u^4 + 148350u^3 + 83989u^2 + 25167u + 3051$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{13} - 9u^{12} + \dots + 14u - 1$
c_2	$u^{13} + 3u^{12} + \dots - 2u - 1$
c_3	$u^{13} - u^{12} + \dots + 4u - 1$
c_4	$u^{13} + 6u^{11} + \dots + 2u - 1$
c_5	$u^{13} - 3u^{12} + \dots - 2u + 1$
c_6	$u^{13} + 3u^{12} + \dots + 10u + 1$
c_7	$u^{13} + u^{12} + \dots + 2u^2 + 1$
c_8	$u^{13} + 3u^{12} + \dots + 2u + 1$
c_9	$u^{13} - u^{12} + \dots + 4u - 1$
c_{10}	$u^{13} + 6u^{11} + \dots + 2u + 1$
c_{11}, c_{12}	$u^{13} - 3u^{12} + \dots + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{13} - y^{12} + \dots + 30y - 1$
c_2, c_5	$y^{13} - 9y^{12} + \dots + 14y - 1$
c_3	$y^{13} + 3y^{12} + \dots - 12y - 1$
c_4, c_{10}	$y^{13} + 12y^{12} + \dots - 10y - 1$
c_6	$y^{13} - 11y^{12} + \dots + 16y - 1$
c_7	$y^{13} + 11y^{12} + \dots - 4y - 1$
c_8, c_{11}, c_{12}	$y^{13} + 9y^{12} + \dots - 16y - 1$
c_9	$y^{13} + 9y^{12} + \dots - 2y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.299683 + 1.053320I$ $a = 0.593765 + 0.622158I$ $b = -0.346775 - 0.499880I$	$4.03587 + 0.38376I$	$4.73339 + 0.12017I$
$u = -0.299683 - 1.053320I$ $a = 0.593765 - 0.622158I$ $b = -0.346775 + 0.499880I$	$4.03587 - 0.38376I$	$4.73339 - 0.12017I$
$u = 0.044736 + 1.203680I$ $a = 0.410218 - 0.674956I$ $b = -0.125085 + 0.679786I$	$3.18980 + 5.96021I$	$3.63825 - 5.77074I$
$u = 0.044736 - 1.203680I$ $a = 0.410218 + 0.674956I$ $b = -0.125085 - 0.679786I$	$3.18980 - 5.96021I$	$3.63825 + 5.77074I$
$u = -0.647940$ $a = 1.04389$ $b = -0.521466$	0.639171	-8.02710
$u = -0.515856 + 0.039018I$ $a = 0.102601 + 0.741557I$ $b = 0.957371 - 0.646629I$	$-4.52059 - 3.12580I$	$-8.05352 + 6.05122I$
$u = -0.515856 - 0.039018I$ $a = 0.102601 - 0.741557I$ $b = 0.957371 + 0.646629I$	$-4.52059 + 3.12580I$	$-8.05352 - 6.05122I$
$u = -0.448017 + 0.119182I$ $a = -0.19232 - 2.52486I$ $b = -1.181340 - 0.032991I$	$-0.43607 - 1.97707I$	$-0.56144 + 3.20484I$
$u = -0.448017 - 0.119182I$ $a = -0.19232 + 2.52486I$ $b = -1.181340 + 0.032991I$	$-0.43607 + 1.97707I$	$-0.56144 - 3.20484I$
$u = -1.92525 + 0.43385I$ $a = -0.245558 + 0.767619I$ $b = 0.294055 + 1.035630I$	$-9.09336 + 1.74394I$	$-4.69358 - 2.80316I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.92525 - 0.43385I$		
$a = -0.245558 - 0.767619I$	$-9.09336 - 1.74394I$	$-4.69358 + 2.80316I$
$b = 0.294055 - 1.035630I$		
$u = 1.96804 + 0.29336I$		
$a = -0.190656 - 0.923645I$	$-13.23440 - 0.87223I$	$-6.54954 - 0.63082I$
$b = 0.16250 - 2.23453I$		
$u = 1.96804 - 0.29336I$		
$a = -0.190656 + 0.923645I$	$-13.23440 + 0.87223I$	$-6.54954 + 0.63082I$
$b = 0.16250 + 2.23453I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{13} - 9u^{12} + \dots + 14u - 1)(u^{39} + 16u^{38} + \dots + 329u + 1)$
c_2	$(u^{13} + 3u^{12} + \dots - 2u - 1)(u^{39} + 4u^{38} + \dots + 15u - 1)$
c_3	$(u^{13} - u^{12} + \dots + 4u - 1)(u^{39} + 10u^{37} + \dots + 249u - 171)$
c_4	$(u^{13} + 6u^{11} + \dots + 2u - 1)(u^{39} + u^{38} + \dots + 7u - 1)$
c_5	$(u^{13} - 3u^{12} + \dots - 2u + 1)(u^{39} + 4u^{38} + \dots + 15u - 1)$
c_6	$(u^{13} + 3u^{12} + \dots + 10u + 1)(u^{39} - 27u^{37} + \dots + 23u - 1)$
c_7	$(u^{13} + u^{12} + \dots + 2u^2 + 1)(u^{39} + 2u^{38} + \dots - 4549u - 567)$
c_8	$(u^{13} + 3u^{12} + \dots + 2u + 1)(u^{39} + 4u^{38} + \dots - 79u - 29)$
c_9	$(u^{13} - u^{12} + \dots + 4u - 1)(u^{39} + 17u^{37} + \dots - 4121u - 2447)$
c_{10}	$(u^{13} + 6u^{11} + \dots + 2u + 1)(u^{39} + u^{38} + \dots + 7u - 1)$
c_{11}, c_{12}	$(u^{13} - 3u^{12} + \dots + 2u - 1)(u^{39} + 4u^{38} + \dots - 79u - 29)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{13} - y^{12} + \dots + 30y - 1)(y^{39} + 24y^{38} + \dots + 99345y - 1)$
c_2, c_5	$(y^{13} - 9y^{12} + \dots + 14y - 1)(y^{39} - 16y^{38} + \dots + 329y - 1)$
c_3	$(y^{13} + 3y^{12} + \dots - 12y - 1)(y^{39} + 20y^{38} + \dots - 233145y - 29241)$
c_4, c_{10}	$(y^{13} + 12y^{12} + \dots - 10y - 1)(y^{39} + 49y^{38} + \dots - 47y - 1)$
c_6	$(y^{13} - 11y^{12} + \dots + 16y - 1)(y^{39} - 54y^{38} + \dots + 67y - 1)$
c_7	$(y^{13} + 11y^{12} + \dots - 4y - 1)$ $\cdot (y^{39} + 40y^{38} + \dots + 13389307y - 321489)$
c_8, c_{11}, c_{12}	$(y^{13} + 9y^{12} + \dots - 16y - 1)(y^{39} + 22y^{38} + \dots - 13189y - 841)$
c_9	$(y^{13} + 9y^{12} + \dots - 2y - 1)$ $\cdot (y^{39} + 34y^{38} + \dots - 55732411y - 5987809)$