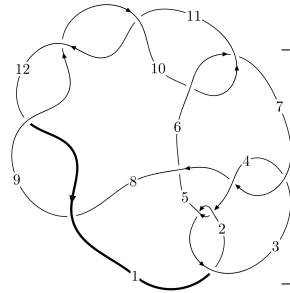
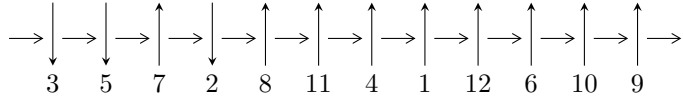


12a₀₀₄₂ (K12a₀₀₄₂)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle u^{69} + u^{68} + \dots + b - 1, u^{69} + u^{68} + \dots + a - 1, u^{70} + 2u^{69} + \dots + 7u^3 - 1 \rangle$$

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

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 75 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.

$$I_1^u = \langle u^{69} + u^{68} + \dots + b - 1, u^{69} + u^{68} + \dots + a - 1, u^{70} + 2u^{69} + \dots + 7u^3 - 1 \rangle \quad \text{I.}$$

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u^{69} - u^{68} + \dots + u + 1 \\ -u^{69} - u^{68} + \dots - u + 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u^8 - u^6 + 3u^4 - 2u^2 + 1 \\ u^8 + 2u^4 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u^{69} + 6u^{67} + \dots - 2u^2 + 2u \\ u^{69} + 2u^{68} + \dots - u^2 - 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^{17} + 2u^{15} - 7u^{13} + 10u^{11} - 15u^9 + 14u^7 - 10u^5 + 4u^3 - u \\ -u^{17} + u^{15} - 5u^{13} + 4u^{11} - 7u^9 + 4u^7 - 2u^5 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^{69} - u^{68} + \dots + u + 1 \\ -u^{67} + 7u^{65} + \dots - u^3 - 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^6 + u^4 - 2u^2 + 1 \\ -u^6 - u^2 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $2u^{69} + 3u^{68} + \dots + 5u + 8$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{70} + 34u^{69} + \dots + 90u + 1$
c_2, c_4	$u^{70} - 6u^{69} + \dots + 10u - 1$
c_3, c_7	$u^{70} - u^{69} + \dots - 160u + 32$
c_5	$u^{70} + 2u^{69} + \dots + 1156u - 809$
c_6, c_{10}	$u^{70} + 2u^{69} + \dots + 7u^3 - 1$
c_8, c_9, c_{11} c_{12}	$u^{70} - 14u^{69} + \dots - 6u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{70} + 10y^{69} + \dots - 6198y + 1$
c_2, c_4	$y^{70} - 34y^{69} + \dots - 90y + 1$
c_3, c_7	$y^{70} - 33y^{69} + \dots - 19968y + 1024$
c_5	$y^{70} + 2y^{69} + \dots - 21431896y + 654481$
c_6, c_{10}	$y^{70} - 14y^{69} + \dots - 6y^2 + 1$
c_8, c_9, c_{11} c_{12}	$y^{70} + 86y^{69} + \dots - 12y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.848963 + 0.526476I$ $a = -2.22564 + 0.01776I$ $b = -2.09137 + 2.15795I$	$-2.96182 + 3.57403I$	$4.58642 - 7.96880I$
$u = 0.848963 - 0.526476I$ $a = -2.22564 - 0.01776I$ $b = -2.09137 - 2.15795I$	$-2.96182 - 3.57403I$	$4.58642 + 7.96880I$
$u = -0.703772 + 0.704213I$ $a = 0.381569 - 0.170222I$ $b = -0.375365 - 0.155977I$	$-3.21240 - 4.24808I$	$2.10319 + 6.98947I$
$u = -0.703772 - 0.704213I$ $a = 0.381569 + 0.170222I$ $b = -0.375365 + 0.155977I$	$-3.21240 + 4.24808I$	$2.10319 - 6.98947I$
$u = 0.891060 + 0.401648I$ $a = 1.315420 - 0.011957I$ $b = 1.54143 - 1.57501I$	$3.91808 + 3.09369I$	$11.08096 - 6.18938I$
$u = 0.891060 - 0.401648I$ $a = 1.315420 + 0.011957I$ $b = 1.54143 + 1.57501I$	$3.91808 - 3.09369I$	$11.08096 + 6.18938I$
$u = -0.883258 + 0.525678I$ $a = -0.476131 + 0.081454I$ $b = -0.446033 + 0.623341I$	$-2.08503 - 5.95261I$	$3.66675 + 8.33839I$
$u = -0.883258 - 0.525678I$ $a = -0.476131 - 0.081454I$ $b = -0.446033 - 0.623341I$	$-2.08503 + 5.95261I$	$3.66675 - 8.33839I$
$u = 0.891599 + 0.333493I$ $a = -1.009990 + 0.050347I$ $b = -1.28724 + 1.45541I$	$2.79991 - 2.14652I$	$9.71265 - 0.23487I$
$u = 0.891599 - 0.333493I$ $a = -1.009990 - 0.050347I$ $b = -1.28724 - 1.45541I$	$2.79991 + 2.14652I$	$9.71265 + 0.23487I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.918259 + 0.512797I$ $a = 1.79709 - 0.31181I$ $b = 1.65385 - 2.00100I$	$2.56157 + 6.39701I$	$8.79876 - 6.86852I$
$u = 0.918259 - 0.512797I$ $a = 1.79709 + 0.31181I$ $b = 1.65385 + 2.00100I$	$2.56157 - 6.39701I$	$8.79876 + 6.86852I$
$u = -0.829178 + 0.656951I$ $a = -0.207393 + 0.091221I$ $b = 0.224040 + 0.560623I$	$-2.80650 - 0.77144I$	0
$u = -0.829178 - 0.656951I$ $a = -0.207393 - 0.091221I$ $b = 0.224040 - 0.560623I$	$-2.80650 + 0.77144I$	0
$u = -0.809134 + 0.473685I$ $a = 0.493245 + 0.198012I$ $b = 0.542821 - 0.286131I$	$-0.89626 - 1.96724I$	$5.61742 + 3.44733I$
$u = -0.809134 - 0.473685I$ $a = 0.493245 - 0.198012I$ $b = 0.542821 + 0.286131I$	$-0.89626 + 1.96724I$	$5.61742 - 3.44733I$
$u = -0.925343 + 0.107219I$ $a = 1.68417 + 0.13957I$ $b = 1.58116 - 0.07754I$	$4.00519 - 7.11466I$	$11.47294 + 7.09856I$
$u = -0.925343 - 0.107219I$ $a = 1.68417 - 0.13957I$ $b = 1.58116 + 0.07754I$	$4.00519 + 7.11466I$	$11.47294 - 7.09856I$
$u = 0.933419 + 0.540532I$ $a = -1.82278 + 0.45018I$ $b = -1.56950 + 2.06664I$	$0.36752 + 11.87470I$	$0. - 10.68011I$
$u = 0.933419 - 0.540532I$ $a = -1.82278 - 0.45018I$ $b = -1.56950 - 2.06664I$	$0.36752 - 11.87470I$	$0. + 10.68011I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.913045 + 0.060749I$ $a = -1.77668 - 0.10528I$ $b = -1.62183 + 0.02869I$	$5.72534 - 1.70594I$	$14.7293 + 1.6894I$
$u = -0.913045 - 0.060749I$ $a = -1.77668 + 0.10528I$ $b = -1.62183 - 0.02869I$	$5.72534 + 1.70594I$	$14.7293 - 1.6894I$
$u = 0.510558 + 0.701915I$ $a = -0.49728 + 1.97299I$ $b = 0.99266 + 1.29279I$	$-1.00091 - 7.27047I$	$1.97102 + 4.94885I$
$u = 0.510558 - 0.701915I$ $a = -0.49728 - 1.97299I$ $b = 0.99266 - 1.29279I$	$-1.00091 + 7.27047I$	$1.97102 - 4.94885I$
$u = -0.682836 + 0.516888I$ $a = 0.113681 + 0.487864I$ $b = 0.399773 + 0.054104I$	$-1.31076 - 1.82986I$	$3.73022 + 5.65801I$
$u = -0.682836 - 0.516888I$ $a = 0.113681 - 0.487864I$ $b = 0.399773 - 0.054104I$	$-1.31076 + 1.82986I$	$3.73022 - 5.65801I$
$u = 0.605074 + 0.592671I$ $a = -0.09109 + 2.15794I$ $b = 1.70767 + 1.21369I$	$-3.74961 + 0.67285I$	$0.349013 + 0.900580I$
$u = 0.605074 - 0.592671I$ $a = -0.09109 - 2.15794I$ $b = 1.70767 - 1.21369I$	$-3.74961 - 0.67285I$	$0.349013 - 0.900580I$
$u = 0.844028 + 0.060120I$ $a = -0.134807 + 0.151297I$ $b = -0.241531 + 1.133100I$	$1.03953 + 1.86544I$	$10.82292 - 4.22163I$
$u = 0.844028 - 0.060120I$ $a = -0.134807 - 0.151297I$ $b = -0.241531 - 1.133100I$	$1.03953 - 1.86544I$	$10.82292 + 4.22163I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.550080 + 0.618252I$ $a = 0.389492 - 0.684495I$ $b = -0.292647 - 0.181492I$	$-3.14503 + 1.63469I$	$-0.27409 - 1.40763I$
$u = -0.550080 - 0.618252I$ $a = 0.389492 + 0.684495I$ $b = -0.292647 + 0.181492I$	$-3.14503 - 1.63469I$	$-0.27409 + 1.40763I$
$u = 0.482045 + 0.648946I$ $a = 0.44168 - 1.88279I$ $b = -1.04226 - 1.10595I$	$1.18543 - 2.05480I$	$5.19934 + 0.85632I$
$u = 0.482045 - 0.648946I$ $a = 0.44168 + 1.88279I$ $b = -1.04226 + 1.10595I$	$1.18543 + 2.05480I$	$5.19934 - 0.85632I$
$u = -0.786558$ $a = 2.34128$ $b = 1.76553$	-0.192753	15.7720
$u = -0.896752 + 0.854059I$ $a = 0.459172 - 0.811143I$ $b = 2.34273 + 0.72734I$	$-3.69892 - 0.39441I$	0
$u = -0.896752 - 0.854059I$ $a = 0.459172 + 0.811143I$ $b = 2.34273 - 0.72734I$	$-3.69892 + 0.39441I$	0
$u = -0.929010 + 0.846151I$ $a = -0.927478 + 0.420395I$ $b = -2.24639 - 1.74550I$	$-3.60036 - 5.92816I$	0
$u = -0.929010 - 0.846151I$ $a = -0.927478 - 0.420395I$ $b = -2.24639 + 1.74550I$	$-3.60036 + 5.92816I$	0
$u = -0.888018 + 0.909430I$ $a = -0.29657 - 1.69935I$ $b = 2.75886 - 1.26977I$	$-6.66789 + 2.80518I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.888018 - 0.909430I$ $a = -0.29657 + 1.69935I$ $b = 2.75886 + 1.26977I$	$-6.66789 - 2.80518I$	0
$u = 0.911261 + 0.892581I$ $a = -0.290253 + 0.624136I$ $b = 0.068856 + 0.705184I$	$-9.41866 + 2.57034I$	0
$u = 0.911261 - 0.892581I$ $a = -0.290253 - 0.624136I$ $b = 0.068856 - 0.705184I$	$-9.41866 - 2.57034I$	0
$u = 0.898692 + 0.907339I$ $a = 0.140709 - 0.798542I$ $b = -0.287738 - 0.771476I$	$-11.28450 - 1.94871I$	0
$u = 0.898692 - 0.907339I$ $a = 0.140709 + 0.798542I$ $b = -0.287738 + 0.771476I$	$-11.28450 + 1.94871I$	0
$u = -0.905732 + 0.903520I$ $a = -0.07637 + 2.14749I$ $b = -3.85473 + 1.23788I$	$-12.02480 - 0.74463I$	0
$u = -0.905732 - 0.903520I$ $a = -0.07637 - 2.14749I$ $b = -3.85473 - 1.23788I$	$-12.02480 + 0.74463I$	0
$u = -0.889133 + 0.920620I$ $a = 0.53328 + 1.76854I$ $b = -2.56436 + 1.69325I$	$-9.24667 + 8.31125I$	0
$u = -0.889133 - 0.920620I$ $a = 0.53328 - 1.76854I$ $b = -2.56436 - 1.69325I$	$-9.24667 - 8.31125I$	0
$u = 0.940923 + 0.878414I$ $a = -0.602531 + 0.307679I$ $b = -0.386679 + 0.597282I$	$-9.32294 + 3.97310I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.940923 - 0.878414I$		
$a = -0.602531 - 0.307679I$	$-9.32294 - 3.97310I$	0
$b = -0.386679 - 0.597282I$		
$u = -0.951721 + 0.881216I$		
$a = 2.16536 - 0.07906I$	$-11.87630 - 5.84179I$	0
$b = 2.78923 + 3.81036I$		
$u = -0.951721 - 0.881216I$		
$a = 2.16536 + 0.07906I$	$-11.87630 + 5.84179I$	0
$b = 2.78923 - 3.81036I$		
$u = 0.958325 + 0.878505I$		
$a = 0.755872 - 0.166096I$	$-11.09220 + 8.53782I$	0
$b = 0.610563 - 0.547751I$		
$u = 0.958325 - 0.878505I$		
$a = 0.755872 + 0.166096I$	$-11.09220 - 8.53782I$	0
$b = 0.610563 + 0.547751I$		
$u = -0.965439 + 0.872470I$		
$a = -1.71394 - 0.28873I$	$-6.41881 - 9.38008I$	0
$b = -1.90629 - 3.41650I$		
$u = -0.965439 - 0.872470I$		
$a = -1.71394 + 0.28873I$	$-6.41881 + 9.38008I$	0
$b = -1.90629 + 3.41650I$		
$u = 0.928310 + 0.917655I$		
$a = -0.170687 - 0.499826I$	$-12.77690 + 4.46172I$	0
$b = -0.403670 - 0.360916I$		
$u = 0.928310 - 0.917655I$		
$a = -0.170687 + 0.499826I$	$-12.77690 - 4.46172I$	0
$b = -0.403670 + 0.360916I$		
$u = -0.972378 + 0.878766I$		
$a = 1.76827 + 0.52427I$	$-8.9768 - 14.9420I$	0
$b = 1.60446 + 3.65424I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.972378 - 0.878766I$ $a = 1.76827 - 0.52427I$ $b = 1.60446 - 3.65424I$	$-8.9768 + 14.9420I$	0
$u = 0.949802 + 0.906372I$ $a = 0.487273 + 0.146616I$ $b = 0.517570 - 0.112853I$	$-12.70680 + 2.25291I$	0
$u = 0.949802 - 0.906372I$ $a = 0.487273 - 0.146616I$ $b = 0.517570 + 0.112853I$	$-12.70680 - 2.25291I$	0
$u = 0.259476 + 0.549278I$ $a = 0.69911 - 1.56843I$ $b = -0.640976 - 0.684812I$	$2.10455 + 0.34368I$	$5.70795 - 0.43243I$
$u = 0.259476 - 0.549278I$ $a = 0.69911 + 1.56843I$ $b = -0.640976 + 0.684812I$	$2.10455 - 0.34368I$	$5.70795 + 0.43243I$
$u = 0.150083 + 0.588539I$ $a = -0.81656 + 1.59215I$ $b = 0.461872 + 0.688311I$	$0.54630 + 5.24919I$	$2.36877 - 5.53828I$
$u = 0.150083 - 0.588539I$ $a = -0.81656 - 1.59215I$ $b = 0.461872 - 0.688311I$	$0.54630 - 5.24919I$	$2.36877 + 5.53828I$
$u = 0.577939$ $a = 0.191919$ $b = -0.448397$	0.745390	14.0380
$u = -0.122739 + 0.348425I$ $a = -0.75582 + 1.74701I$ $b = 0.302481 + 0.442001I$	$-1.73126 - 0.78637I$	$-2.82494 + 1.32713I$
$u = -0.122739 - 0.348425I$ $a = -0.75582 - 1.74701I$ $b = 0.302481 - 0.442001I$	$-1.73126 + 0.78637I$	$-2.82494 - 1.32713I$

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

(i) Arc colorings

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

$$a_{10} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_7 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

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

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

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

$$a_2 = \begin{pmatrix} u^4 + u + 1 \\ u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^4 - u^2 + 1 \\ u^4 \end{pmatrix}$$

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

(ii) Obstruction class = 1

(iii) Cusp Shapes = $u^3 - 3u^2 + u + 2$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y - 1)^5$
c_3, c_7	y^5
c_5, c_8, c_9 c_{11}, c_{12}	$y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1$
c_6, c_{10}	$y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.758138 + 0.584034I$ $a = -0.827780 - 0.637683I$ $b = -0.069642 - 1.221720I$	$-3.46474 - 2.21397I$	$0.88087 + 4.04855I$
$u = -0.758138 - 0.584034I$ $a = -0.827780 + 0.637683I$ $b = -0.069642 + 1.221720I$	$-3.46474 + 2.21397I$	$0.88087 - 4.04855I$
$u = 0.935538 + 0.903908I$ $a = 0.552827 - 0.534136I$ $b = -0.38271 - 1.43804I$	$-12.60320 + 3.33174I$	$1.28666 - 2.53508I$
$u = 0.935538 - 0.903908I$ $a = 0.552827 + 0.534136I$ $b = -0.38271 + 1.43804I$	$-12.60320 - 3.33174I$	$1.28666 + 2.53508I$
$u = 0.645200$ $a = 1.54991$ $b = 0.904706$	-0.762751	1.66490

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^5)(u^{70} + 34u^{69} + \dots + 90u + 1)$
c_2	$((u-1)^5)(u^{70} - 6u^{69} + \dots + 10u - 1)$
c_3, c_7	$u^5(u^{70} - u^{69} + \dots - 160u + 32)$
c_4	$((u+1)^5)(u^{70} - 6u^{69} + \dots + 10u - 1)$
c_5	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)(u^{70} + 2u^{69} + \dots + 1156u - 809)$
c_6	$(u^5 + u^4 - u^2 + u + 1)(u^{70} + 2u^{69} + \dots + 7u^3 - 1)$
c_8, c_9	$(u^5 + u^4 + 4u^3 + 3u^2 + 3u + 1)(u^{70} - 14u^{69} + \dots - 6u^2 + 1)$
c_{10}	$(u^5 - u^4 + u^2 + u - 1)(u^{70} + 2u^{69} + \dots + 7u^3 - 1)$
c_{11}, c_{12}	$(u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1)(u^{70} - 14u^{69} + \dots - 6u^2 + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y - 1)^5)(y^{70} + 10y^{69} + \dots - 6198y + 1)$
c_2, c_4	$((y - 1)^5)(y^{70} - 34y^{69} + \dots - 90y + 1)$
c_3, c_7	$y^5(y^{70} - 33y^{69} + \dots - 19968y + 1024)$
c_5	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)$ $\cdot (y^{70} + 2y^{69} + \dots - 21431896y + 654481)$
c_6, c_{10}	$(y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1)(y^{70} - 14y^{69} + \dots - 6y^2 + 1)$
c_8, c_9, c_{11} c_{12}	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)(y^{70} + 86y^{69} + \dots - 12y + 1)$