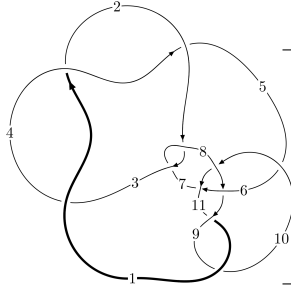
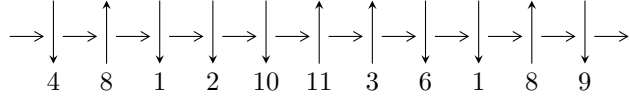


11n₁₅₂ (K11n₁₅₂)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle u^2 + b - 2u, u^2 + a - 2u + 1, u^{11} - 5u^{10} + 8u^9 + 3u^8 - 22u^7 + 14u^6 + 18u^5 - 19u^4 - 7u^3 + 7u^2 + 2u + 1 \rangle$$

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

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

$$I_4^u = \langle b + 1, -17u^9 + 33u^8 - 84u^7 + 13u^6 - 54u^5 - 142u^4 + 20u^3 - 335u^2 + 16a + 71u - 145, \\ u^{10} - 2u^9 + 5u^8 - u^7 + 3u^6 + 8u^5 - 2u^4 + 19u^3 - 6u^2 + 8u - 1 \rangle$$

* 4 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 31 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.

$$\text{I. } I_1^u = \langle u^2 + b - 2u, u^2 + a - 2u + 1, u^{11} - 5u^{10} + \dots + 2u + 1 \rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} -u^6 + 4u^5 - 5u^4 + 4u^2 - 2u + 1 \\ -u^6 + 4u^5 - 4u^4 - 2u^3 + 5u^2 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

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

$$a_8 = \begin{pmatrix} -u^9 + 4u^8 - 4u^7 - 6u^6 + 13u^5 - 12u^3 + 2u^2 + 5u \\ -u^{10} + 3u^9 - u^8 - 8u^7 + 8u^6 + 7u^5 - 11u^4 - 4u^3 + 5u^2 + 3u + 1 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 2u^9 - 6u^8 + 2u^7 + 13u^6 - 12u^5 - 9u^4 + 10u^3 + 2u^2 - 2u + 1 \\ 2u^9 - 5u^8 + 12u^6 - 6u^5 - 10u^4 + 4u^3 + 4u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 2u^9 - 6u^8 + 2u^7 + 13u^6 - 12u^5 - 9u^4 + 10u^3 + 2u^2 - 2u + 1 \\ 2u^9 - 5u^8 + 12u^6 - 6u^5 - 10u^4 + 4u^3 + 4u^2 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes

$$= 4u^{10} - 16u^9 + 20u^8 + 8u^7 - 24u^6 - 16u^5 + 28u^4 + 32u^3 - 28u^2 - 24u - 6$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4 c_9, c_{11}	$u^{11} - 5u^{10} + \dots + 2u + 1$
c_2, c_7, c_{10}	$u^{11} + u^{10} + \dots + 2u + 1$
c_5	$u^{11} + u^{10} + \dots - 33u^2 - 27$
c_6	$u^{11} - u^{10} + 3u^8 + 12u^7 + 10u^6 - 6u^5 - 33u^4 - 31u^3 - 33u^2 - 10u - 11$
c_8	$u^{11} - u^{10} + u^8 + 8u^7 - 12u^6 + 8u^5 + 3u^4 + 3u^3 - 3u^2 + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_9, c_{11}	$y^{11} - 9y^{10} + \dots - 10y - 1$
c_2, c_7, c_{10}	$y^{11} - 9y^{10} + \dots - 2y - 1$
c_5	$y^{11} + 15y^{10} + \dots - 1782y - 729$
c_6	$y^{11} - y^{10} + \dots - 626y - 121$
c_8	$y^{11} - y^{10} + \dots + 6y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.07566$ $a = -4.30835$ $b = -3.30835$	-3.78211	32.5960
$u = -0.832306 + 0.202239I$ $a = -3.31644 + 0.74113I$ $b = -2.31644 + 0.74113I$	$-2.76312 + 1.08944I$	$-13.75530 + 1.30535I$
$u = -0.832306 - 0.202239I$ $a = -3.31644 - 0.74113I$ $b = -2.31644 - 0.74113I$	$-2.76312 - 1.08944I$	$-13.75530 - 1.30535I$
$u = 1.263210 + 0.139301I$ $a = -0.0498765 - 0.0733316I$ $b = 0.950123 - 0.073332I$	$-8.16883 - 4.71969I$	$-15.8344 + 7.6612I$
$u = 1.263210 - 0.139301I$ $a = -0.0498765 + 0.0733316I$ $b = 0.950123 + 0.073332I$	$-8.16883 + 4.71969I$	$-15.8344 - 7.6612I$
$u = 1.31469 + 0.95832I$ $a = 0.819354 - 0.603155I$ $b = 1.81935 - 0.60315I$	$7.84139 - 5.06071I$	$-4.48302 + 2.40182I$
$u = 1.31469 - 0.95832I$ $a = 0.819354 + 0.603155I$ $b = 1.81935 + 0.60315I$	$7.84139 + 5.06071I$	$-4.48302 - 2.40182I$
$u = -0.113634 + 0.293281I$ $a = -1.154170 + 0.653215I$ $b = -0.154166 + 0.653215I$	$0.003691 + 1.266700I$	$-0.27668 - 5.30833I$
$u = -0.113634 - 0.293281I$ $a = -1.154170 - 0.653215I$ $b = -0.154166 - 0.653215I$	$0.003691 - 1.266700I$	$-0.27668 + 5.30833I$
$u = 1.40586 + 1.00997I$ $a = 0.855309 - 0.819815I$ $b = 1.85531 - 0.81981I$	$7.4453 - 12.4339I$	$-4.94880 + 5.95992I$

	Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$1.40586 - 1.00997I$		
$a =$	$0.855309 + 0.819815I$	$7.4453 + 12.4339I$	$-4.94880 - 5.95992I$
$b =$	$1.85531 + 0.81981I$		

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

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^4 + u^3 + 2u^2 - u - 2 \\ -1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} u^4 - u^3 - 3u^2 + 3u + 2 \\ u + 1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -u^4 + u^3 + 2u^2 - 2u - 2 \\ -u - 1 \end{pmatrix}$$

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

$$a_{11} = \begin{pmatrix} -u^4 + u^3 + 2u^2 - u - 2 \\ -1 \end{pmatrix}$$

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

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

(ii) Obstruction class = 1

(iii) Cusp Shapes = $-3u^4 + 7u^3 + 2u^2 - 6u - 7$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.21774$ $a = -1.82120$ $b = -1.00000$	-4.04602	-15.9650
$u = -0.309916 + 0.549911I$ $a = -1.77780 - 1.38013I$ $b = -1.00000$	$-1.97403 + 1.53058I$	$-3.57269 - 4.45807I$
$u = -0.309916 - 0.549911I$ $a = -1.77780 + 1.38013I$ $b = -1.00000$	$-1.97403 - 1.53058I$	$-3.57269 + 4.45807I$
$u = 1.41878 + 0.21917I$ $a = -0.311598 - 0.106340I$ $b = -1.00000$	$-7.51750 - 4.40083I$	$-3.44484 + 1.78781I$
$u = 1.41878 - 0.21917I$ $a = -0.311598 + 0.106340I$ $b = -1.00000$	$-7.51750 + 4.40083I$	$-3.44484 - 1.78781I$

$$\text{III. } I_3^u = \langle b + 1, a^5 + 4a^4 + 4a^3 - a^2 - 2a + 1, u + 1 \rangle$$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

$$a_6 = \begin{pmatrix} -a^2 - a + 1 \\ a + 2 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -1 \\ -a - 2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0 \\ a^4 + 5a^3 + 8a^2 + 3a - 2 \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 0 \\ a^4 + 5a^3 + 8a^2 + 3a - 2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ a^4 + 5a^3 + 8a^2 + 3a - 2 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $-3a^4 - 5a^3 + 5a^2 + 7a - 7$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = -1.30992 + 0.54991I$ $b = -1.00000$	$-1.97403 + 1.53058I$	$-3.57269 - 4.45807I$
$u = -1.00000$ $a = -1.30992 - 0.54991I$ $b = -1.00000$	$-1.97403 - 1.53058I$	$-3.57269 + 4.45807I$
$u = -1.00000$ $a = 0.418784 + 0.219165I$ $b = -1.00000$	$-7.51750 - 4.40083I$	$-3.44484 + 1.78781I$
$u = -1.00000$ $a = 0.418784 - 0.219165I$ $b = -1.00000$	$-7.51750 + 4.40083I$	$-3.44484 - 1.78781I$
$u = -1.00000$ $a = -2.21774$ $b = -1.00000$	-4.04602	-15.9650

IV. $I_4^u = \langle b + 1, -17u^9 + 33u^8 + \dots + 16a - 145, u^{10} - 2u^9 + \dots + 8u - 1 \rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 1.06250u^9 - 2.06250u^8 + \dots - 4.43750u + 9.06250 \\ -1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.31250u^9 + 2.43750u^8 + \dots + 4.93750u - 9.43750 \\ 0.0625000u^9 - 0.0625000u^8 + \dots + 0.562500u + 1.06250 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u \\ u \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} u^9 - 2u^8 + 5u^7 - u^6 + 3u^5 + 8u^4 - 2u^3 + 19u^2 - 5u + 9 \\ -0.0625000u^9 + 0.0625000u^8 + \dots - 0.562500u - 1.06250 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{4}u^9 - \frac{1}{2}u^8 + \dots - \frac{11}{4}u + 3 \\ \frac{1}{4}u^7 - \frac{1}{4}u^6 + \dots - \frac{5}{4}u - \frac{1}{4} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 1.18750u^9 - 2.18750u^8 + \dots - 1.31250u + 11.1875 \\ -0.312500u^9 + 0.437500u^8 + \dots + 0.937500u - 1.43750 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{1}{4}u^9 - \frac{1}{2}u^8 + \dots - \frac{1}{4}u - 3 \\ -\frac{3}{4}u^8 + \frac{1}{4}u^7 + \dots - \frac{3}{4}u + \frac{1}{2} \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{1}{4}u^9 - \frac{1}{2}u^8 + \dots - \frac{1}{4}u - 3 \\ -\frac{3}{4}u^8 + \frac{1}{4}u^7 + \dots - \frac{3}{4}u + \frac{1}{2} \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-\frac{1}{4}u^9 + \frac{7}{8}u^8 - \frac{9}{4}u^7 + 2u^6 - \frac{3}{8}u^5 - \frac{23}{8}u^4 + \frac{33}{8}u^3 - \frac{35}{8}u^2 + \frac{31}{4}u - \frac{37}{8}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_3, c_4 c_9, c_{11}	$u^{10} - 2u^9 + 5u^8 - u^7 + 3u^6 + 8u^5 - 2u^4 + 19u^3 - 6u^2 + 8u - 1$
c_2, c_7, c_{10}	$u^{10} + u^9 + \dots + 160u + 32$
c_5	$u^{10} + 2u^9 + \dots - 100u - 43$
c_6	$u^{10} - 10u^8 + 43u^6 + 17u^5 - 35u^4 + 46u^3 + 64u^2 - 38u - 29$
c_8	$(u^5 - u^4 + u^2 + u - 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_9, c_{11}	$y^{10} + 6y^9 + \dots - 52y + 1$
c_2, c_7, c_{10}	$y^{10} - 21y^9 + \dots - 9728y + 1024$
c_5	$y^{10} + 20y^9 + \dots - 13440y + 1849$
c_6	$y^{10} - 20y^9 + \dots - 5156y + 841$
c_8	$(y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.394402 + 1.113210I$ $a = -0.406775 - 0.098778I$ $b = -1.00000$	$0.17487 + 2.21397I$	$-2.88087 - 4.04855I$
$u = -0.394402 - 1.113210I$ $a = -0.406775 + 0.098778I$ $b = -1.00000$	$0.17487 - 2.21397I$	$-2.88087 + 4.04855I$
$u = 0.124008 + 0.699342I$ $a = 0.640226 - 0.273116I$ $b = -1.00000$	$0.17487 - 2.21397I$	$-2.88087 + 4.04855I$
$u = 0.124008 - 0.699342I$ $a = 0.640226 + 0.273116I$ $b = -1.00000$	$0.17487 + 2.21397I$	$-2.88087 - 4.04855I$
$u = -1.30598$ $a = -0.898398$ $b = -1.00000$	-2.52712	-3.66490
$u = 0.93349 + 1.31744I$ $a = -0.565488 + 1.008900I$ $b = -1.00000$	$9.31336 - 3.33174I$	$-3.28666 + 2.53508I$
$u = 0.93349 - 1.31744I$ $a = -0.565488 - 1.008900I$ $b = -1.00000$	$9.31336 + 3.33174I$	$-3.28666 - 2.53508I$
$u = 0.92355 + 1.51424I$ $a = -0.639912 + 0.836095I$ $b = -1.00000$	$9.31336 + 3.33174I$	$-3.28666 - 2.53508I$
$u = 0.92355 - 1.51424I$ $a = -0.639912 - 0.836095I$ $b = -1.00000$	$9.31336 - 3.33174I$	$-3.28666 + 2.53508I$
$u = 0.132691$ $a = 8.84230$ $b = -1.00000$	-2.52712	-3.66490

V. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_9	$(u-1)^5(u^5+u^4-2u^3-u^2+u-1)$ $\cdot (u^{10}-2u^9+5u^8-u^7+3u^6+8u^5-2u^4+19u^3-6u^2+8u-1)$ $\cdot (u^{11}-5u^{10}+\dots+2u+1)$
c_2	$u^5(u^5-u^4+\dots+u-1)(u^{10}+u^9+\dots+160u+32)$ $\cdot (u^{11}+u^{10}+\dots+2u+1)$
c_3, c_4, c_{11}	$(u+1)^5(u^5-u^4-2u^3+u^2+u+1)$ $\cdot (u^{10}-2u^9+5u^8-u^7+3u^6+8u^5-2u^4+19u^3-6u^2+8u-1)$ $\cdot (u^{11}-5u^{10}+\dots+2u+1)$
c_5	$(u^5+u^4-2u^3-u^2+u-1)(u^5+u^4-u^3-4u^2-3u-1)$ $\cdot (u^{10}+2u^9+\dots-100u-43)(u^{11}+u^{10}+\dots-33u^2-27)$
c_6	$(u^5-u^4+2u^3-u^2+u-1)(u^5+u^4-u^3-4u^2-3u-1)$ $\cdot (u^{10}-10u^8+43u^6+17u^5-35u^4+46u^3+64u^2-38u-29)$ $\cdot (u^{11}-u^{10}+3u^8+12u^7+10u^6-6u^5-33u^4-31u^3-33u^2-10u-11)$
c_7, c_{10}	$u^5(u^5+u^4+\dots+u+1)(u^{10}+u^9+\dots+160u+32)$ $\cdot (u^{11}+u^{10}+\dots+2u+1)$
c_8	$(u^5-u^4+u^2+u-1)^2(u^5+3u^4+4u^3+u^2-u-1)^2$ $\cdot (u^{11}-u^{10}+u^8+8u^7-12u^6+8u^5+3u^4+3u^3-3u^2+1)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_3, c_4 c_9, c_{11}	$((y-1)^5)(y^5 - 5y^4 + \dots - y - 1)(y^{10} + 6y^9 + \dots - 52y + 1)$ $\cdot (y^{11} - 9y^{10} + \dots - 10y - 1)$
c_2, c_7, c_{10}	$y^5(y^5 + 3y^4 + \dots - y - 1)(y^{10} - 21y^9 + \dots - 9728y + 1024)$ $\cdot (y^{11} - 9y^{10} + \dots - 2y - 1)$
c_5	$(y^5 - 5y^4 + 8y^3 - 3y^2 - y - 1)(y^5 - 3y^4 + 3y^3 - 8y^2 + y - 1)$ $\cdot (y^{10} + 20y^9 + \dots - 13440y + 1849)$ $\cdot (y^{11} + 15y^{10} + \dots - 1782y - 729)$
c_6	$(y^5 - 3y^4 + 3y^3 - 8y^2 + y - 1)(y^5 + 3y^4 + 4y^3 + y^2 - y - 1)$ $\cdot (y^{10} - 20y^9 + \dots - 5156y + 841)(y^{11} - y^{10} + \dots - 626y - 121)$
c_8	$(y^5 - y^4 + 4y^3 - 3y^2 + 3y - 1)^2(y^5 - y^4 + 8y^3 - 3y^2 + 3y - 1)^2$ $\cdot (y^{11} - y^{10} + \dots + 6y - 1)$