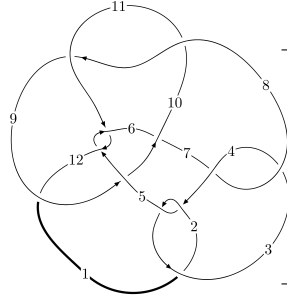
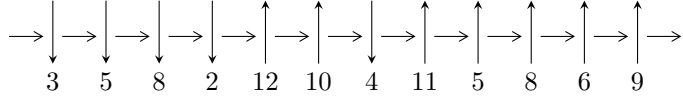


12n₀₂₁₀ (K12n₀₂₁₀)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle 7u^{16} - 135u^{15} + \dots + 256b - 55, 79u^{16} - 1263u^{15} + \dots + 256a - 1471, u^{17} - 16u^{16} + \dots - 11u - 1 \rangle$$

$$I_2^u = \langle 2202374768a^8 + 4881742261799b + \dots + 3048286097801a + 1155541803378, \\ a^9 + 3a^8 + 20a^7 + 27a^6 + 39a^5 + 35a^4 + 54a^3 + 232a^2 + 63a + 557, u + 1 \rangle$$

$$I_3^u = \langle b, u^7 - 2u^6 - 2u^5 + 4u^4 + 2u^3 - 2u^2 + a - 2, u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 34 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.

$$\text{I. } I_1^u = \langle 7u^{16} - 135u^{15} + \dots + 256b - 55, 79u^{16} - 1263u^{15} + \dots + 256a - 1471, u^{17} - 16u^{16} + \dots - 11u - 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_4 &= \begin{pmatrix} -0.308594u^{16} + 4.93359u^{15} + \dots - 74.1016u + 5.74609 \\ -0.0273438u^{16} + 0.527344u^{15} + \dots - 1.53906u + 0.214844 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -0.335938u^{16} + 5.46094u^{15} + \dots - 75.6406u + 5.96094 \\ -0.0273438u^{16} + 0.527344u^{15} + \dots - 1.53906u + 0.214844 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0.0898438u^{16} - 1.35547u^{15} + \dots - 24.3828u - 4.87109 \\ -0.0390625u^{16} + 0.578125u^{15} + \dots + 3.41406u - 0.0468750 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -u \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.0546875u^{16} - 0.843750u^{15} + \dots - 24.8203u - 4.90625 \\ -0.00390625u^{16} + 0.0664063u^{15} + \dots + 3.85156u - 0.0117188 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -0.375000u^{16} + 5.94531u^{15} + \dots + 5.21094u - 1.42969 \\ 0.0429688u^{16} - 0.675781u^{15} + \dots + 3.79688u + 0.199219 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.332031u^{16} + 5.27734u^{15} + \dots + 8.03125u - 1.28516 \\ -0.0625000u^{16} + 0.617188u^{15} + \dots + 3.53906u + 0.179688 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 0.121094u^{16} - 1.99609u^{15} + \dots + 25.7266u - 2.05859 \\ 0.0585938u^{16} - 0.871094u^{15} + \dots + 0.726563u - 0.121094 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -0.242188u^{16} + 3.99219u^{15} + \dots - 51.4531u + 4.11719 \\ -0.0585938u^{16} + 0.871094u^{15} + \dots - 0.726563u + 0.121094 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

$$\text{(iii) Cusp Shapes} = \frac{39}{128}u^{16} - \frac{315}{64}u^{15} + \dots + \frac{2341}{128}u - \frac{531}{64}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{17} + 37u^{16} + \dots + u + 1$
c_2, c_4	$u^{17} - 15u^{16} + \dots + 3u - 1$
c_3, c_7	$u^{17} + u^{16} + \dots + 384u - 256$
c_5, c_{11}	$u^{17} + 2u^{16} + \dots + 3u + 1$
c_6	$u^{17} - 3u^{16} + \dots - 167922u - 192217$
c_8, c_{10}	$u^{17} + 16u^{16} + \dots - 11u + 1$
c_9	$u^{17} + u^{16} + \dots - 512u - 512$
c_{12}	$u^{17} - 6u^{16} + \dots - 19686u + 2393$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{17} - 57y^{16} + \dots - 7859y - 1$
c_2, c_4	$y^{17} - 37y^{16} + \dots + y - 1$
c_3, c_7	$y^{17} - 33y^{16} + \dots + 245760y - 65536$
c_5, c_{11}	$y^{17} + 12y^{16} + \dots + 25y - 1$
c_6	$y^{17} - 45y^{16} + \dots + 806894237728y - 36947375089$
c_8, c_{10}	$y^{17} - 40y^{16} + \dots + 221y - 1$
c_9	$y^{17} - 39y^{16} + \dots + 3670016y - 262144$
c_{12}	$y^{17} - 38y^{16} + \dots + 475084108y - 5726449$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.135290 + 0.215005I$ $a = -0.040636 - 0.276979I$ $b = -0.149177 - 0.310693I$	$0.959539 - 1.013620I$	$4.00582 - 0.77460I$
$u = -1.135290 - 0.215005I$ $a = -0.040636 + 0.276979I$ $b = -0.149177 + 0.310693I$	$0.959539 + 1.013620I$	$4.00582 + 0.77460I$
$u = -0.706391$ $a = -0.663382$ $b = -0.408620$	1.02663	10.5660
$u = -0.405211 + 0.413893I$ $a = 0.45966 + 1.59259I$ $b = 0.690024 + 0.240704I$	$-1.52593 - 2.30609I$	$0.84073 + 4.41351I$
$u = -0.405211 - 0.413893I$ $a = 0.45966 - 1.59259I$ $b = 0.690024 - 0.240704I$	$-1.52593 + 2.30609I$	$0.84073 - 4.41351I$
$u = 0.079841 + 0.128622I$ $a = -1.81733 - 9.04439I$ $b = -0.634179 + 0.647207I$	$-4.28789 - 1.16759I$	$-4.15148 - 0.42617I$
$u = 0.079841 - 0.128622I$ $a = -1.81733 + 9.04439I$ $b = -0.634179 - 0.647207I$	$-4.28789 + 1.16759I$	$-4.15148 + 0.42617I$
$u = -0.0625865$ $a = 10.3787$ $b = 0.442272$	-1.26971	-9.85470
$u = 1.95602 + 1.08672I$ $a = -1.45768 + 3.13444I$ $b = 2.02549 - 2.27905I$	$19.0196 + 12.9458I$	$0.98224 - 5.00778I$
$u = 1.95602 - 1.08672I$ $a = -1.45768 - 3.13444I$ $b = 2.02549 + 2.27905I$	$19.0196 - 12.9458I$	$0.98224 + 5.00778I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 2.05027 + 1.05712I$ $a = 1.67587 - 2.90707I$ $b = -2.13688 + 2.10608I$	$-16.2212 + 7.3387I$	$3.75665 - 2.42096I$
$u = 2.05027 - 1.05712I$ $a = 1.67587 + 2.90707I$ $b = -2.13688 - 2.10608I$	$-16.2212 - 7.3387I$	$3.75665 + 2.42096I$
$u = 2.10513 + 0.95501I$ $a = -2.03508 + 2.83272I$ $b = 2.36097 - 2.01644I$	$19.0497 + 1.6784I$	$0.985857 + 0.191287I$
$u = 2.10513 - 0.95501I$ $a = -2.03508 - 2.83272I$ $b = 2.36097 + 2.01644I$	$19.0497 - 1.6784I$	$0.985857 - 0.191287I$
$u = 2.46829 + 0.15035I$ $a = 3.58204 - 0.48409I$ $b = -3.25130 + 0.32944I$	$-0.61891 + 5.84472I$	$0.94829 - 2.62397I$
$u = 2.46829 - 0.15035I$ $a = 3.58204 + 0.48409I$ $b = -3.25130 - 0.32944I$	$-0.61891 - 5.84472I$	$0.94829 + 2.62397I$
$u = 2.53085$ $a = -3.44904$ $b = 3.15648$	3.68181	3.55300

$$\text{II. } I_2^u = \langle 4.88 \times 10^{12}b + 2.20 \times 10^9a^8 + \cdots + 3.05 \times 10^{12}a + 1.16 \times 10^{12}, a^9 + 3a^8 + \cdots + 63a + 557, u + 1 \rangle$$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} a \\ -0.000451145a^8 - 0.00112473a^7 + \cdots - 0.624426a - 0.236707 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -0.000451145a^8 - 0.00112473a^7 + \cdots + 0.375574a - 0.236707 \\ -0.000451145a^8 - 0.00112473a^7 + \cdots - 0.624426a - 0.236707 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.000228701a^8 + 0.00198520a^7 + \cdots + 0.208285a + 0.748712 \\ -0.000596483a^8 - 0.00336172a^7 + \cdots - 0.154624a + 0.0980179 \end{pmatrix}$$

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

$$a_6 = \begin{pmatrix} 0.000596483a^8 + 0.00336172a^7 + \cdots + 0.154624a - 0.0980179 \\ -0.00142167a^8 - 0.00473825a^7 + \cdots - 0.100963a + 0.944748 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 0.00210365a^8 + 0.00495200a^7 + \cdots + 0.412355a + 0.509691 \\ -0.00180466a^8 - 0.00643986a^7 + \cdots - 0.540321a - 1.18749 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.00240264a^8 + 0.00346415a^7 + \cdots + 0.284388a - 0.168104 \\ -0.00210365a^8 - 0.00495200a^7 + \cdots - 0.412355a - 0.509691 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00391662a^8 + 0.00543003a^7 + \cdots + 0.764313a - 0.311168 \\ -0.00391662a^8 - 0.00543003a^7 + \cdots - 0.764313a + 0.311168 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.00301433a^8 + 0.00318056a^7 + \cdots + 0.515461a - 0.784582 \\ -0.00391662a^8 - 0.00543003a^7 + \cdots - 0.764313a + 0.311168 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes

$$= -\frac{14902841729}{4881742261799}a^8 + \frac{166367890500}{4881742261799}a^7 + \cdots + \frac{12350657617094}{4881742261799}a + \frac{35285795123487}{4881742261799}$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1$
c_2	$u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1$
c_3	$u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1$
c_4	$u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1$
c_5	$u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1$
c_6	$u^9 + 2u^8 + 5u^7 + 22u^6 + 52u^5 + 63u^4 + 41u^3 + 10u^2 - 2u - 1$
c_7	$u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1$
c_8	$(u + 1)^9$
c_9	u^9
c_{10}	$(u - 1)^9$
c_{11}	$u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1$
c_{12}	$u^9 + 3u^8 + 3u^7 - 2u^6 + u^5 - 9u^4 + 3u^3 + 2u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1$
c_2, c_4	$y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1$
c_3, c_7	$y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1$
c_5, c_{11}	$y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1$
c_6	$y^9 + 6y^8 + \cdots + 24y - 1$
c_8, c_{10}	$(y - 1)^9$
c_9	y^9
c_{12}	$y^9 - 3y^8 + 23y^7 + 62y^6 - 13y^5 - 57y^4 + 9y^3 - 6y^2 + 4y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.00000$ $a = 0.06261 + 1.45114I$ $b = -0.140343 - 0.966856I$	$3.42837 - 2.09337I$	$7.05683 + 6.62869I$
$u = -1.00000$ $a = 0.06261 - 1.45114I$ $b = -0.140343 + 0.966856I$	$3.42837 + 2.09337I$	$7.05683 - 6.62869I$
$u = -1.00000$ $a = 1.21902 + 0.95904I$ $b = -0.628449 - 0.875112I$	$1.02799 - 2.45442I$	$3.88318 + 3.00529I$
$u = -1.00000$ $a = 1.21902 - 0.95904I$ $b = -0.628449 + 0.875112I$	$1.02799 + 2.45442I$	$3.88318 - 3.00529I$
$u = -1.00000$ $a = -1.91873$ $b = -0.512358$	0.446489	-13.4320
$u = -1.00000$ $a = -1.03999 + 1.61486I$ $b = 0.728966 - 0.986295I$	$-1.95319 + 7.08493I$	$-2.13339 - 8.87891I$
$u = -1.00000$ $a = -1.03999 - 1.61486I$ $b = 0.728966 + 0.986295I$	$-1.95319 - 7.08493I$	$-2.13339 + 8.87891I$
$u = -1.00000$ $a = -0.78228 + 3.85888I$ $b = 0.796005 - 0.733148I$	$-2.72642 - 1.33617I$	$1.90921 - 3.07774I$
$u = -1.00000$ $a = -0.78228 - 3.85888I$ $b = 0.796005 + 0.733148I$	$-2.72642 + 1.33617I$	$1.90921 + 3.07774I$

III.

$$I_3^u = \langle b, u^7 - 2u^6 - 2u^5 + 4u^4 + 2u^3 - 2u^2 + a - 2, u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1 \rangle$$

(i) Arc colorings

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

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

$$a_4 = \begin{pmatrix} -u^7 + 2u^6 + 2u^5 - 4u^4 - 2u^3 + 2u^2 + 2 \\ 0 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} -u^7 + 2u^6 + 2u^5 - 4u^4 - 2u^3 + 2u^2 + 2 \\ 0 \end{pmatrix}$$

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

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

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

$$a_{12} = \begin{pmatrix} u^5 - 2u^3 + u \\ -u^5 + u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} u^7 - 2u^5 + 2u \\ -u^7 - u^6 + 2u^5 + 3u^4 - 2u^2 - 2u - 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u^7 + 2u^5 - 2u \\ u^7 + u^6 - 2u^5 - 3u^4 + 2u^2 + 2u + 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 2u^6 - 4u^4 - 2u^3 + 2u^2 + 2u + 2 \\ -u^7 - u^6 + 2u^5 + 3u^4 - 2u^2 - 2u - 1 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $-u^7 + 9u^6 - u^5 - 22u^4 - 3u^3 + 12u^2 + 13u + 14$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y - 1)^8$
c_3, c_7	y^8
c_5, c_{11}	$y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1$
c_6, c_8, c_{10}	$y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1$
c_9, c_{12}	$y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.180120 + 0.268597I$ $a = 1.21928 - 2.03110I$ $b = 0$	$-0.604279 - 1.131230I$	$-3.30729 - 4.28492I$
$u = -1.180120 - 0.268597I$ $a = 1.21928 + 2.03110I$ $b = 0$	$-0.604279 + 1.131230I$	$-3.30729 + 4.28492I$
$u = -0.108090 + 0.747508I$ $a = -1.230330 - 0.083902I$ $b = 0$	$-3.80435 - 2.57849I$	$-1.56478 + 3.68514I$
$u = -0.108090 - 0.747508I$ $a = -1.230330 + 0.083902I$ $b = 0$	$-3.80435 + 2.57849I$	$-1.56478 - 3.68514I$
$u = 1.37100$ $a = 0.337834$ $b = 0$	4.85780	14.7400
$u = 1.334530 + 0.318930I$ $a = -0.370895 - 0.073482I$ $b = 0$	$0.73474 + 6.44354I$	$8.02705 - 7.90662I$
$u = 1.334530 - 0.318930I$ $a = -0.370895 + 0.073482I$ $b = 0$	$0.73474 - 6.44354I$	$8.02705 + 7.90662I$
$u = -0.463640$ $a = 2.42604$ $b = 0$	-0.799899	9.95010

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u-1)^8(u^9 - 5u^8 + 12u^7 - 15u^6 + 9u^5 + u^4 - 4u^3 + 2u^2 + u - 1)$ $\cdot (u^{17} + 37u^{16} + \dots + u + 1)$
c_2	$(u-1)^8(u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1)$ $\cdot (u^{17} - 15u^{16} + \dots + 3u - 1)$
c_3	$u^8(u^9 + u^8 + 2u^7 + u^6 + 3u^5 + u^4 + 2u^3 + u - 1)$ $\cdot (u^{17} + u^{16} + \dots + 384u - 256)$
c_4	$(u+1)^8(u^9 - u^8 - 2u^7 + 3u^6 + u^5 - 3u^4 + 2u^3 - u + 1)$ $\cdot (u^{17} - 15u^{16} + \dots + 3u - 1)$
c_5	$(u^8 + 3u^7 + 7u^6 + 10u^5 + 11u^4 + 10u^3 + 6u^2 + 4u + 1)$ $\cdot (u^9 - 3u^8 + 8u^7 - 13u^6 + 17u^5 - 17u^4 + 12u^3 - 6u^2 + u + 1)$ $\cdot (u^{17} + 2u^{16} + \dots + 3u + 1)$
c_6	$(u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1)$ $\cdot (u^9 + 2u^8 + 5u^7 + 22u^6 + 52u^5 + 63u^4 + 41u^3 + 10u^2 - 2u - 1)$ $\cdot (u^{17} - 3u^{16} + \dots - 167922u - 192217)$
c_7	$u^8(u^9 - u^8 + 2u^7 - u^6 + 3u^5 - u^4 + 2u^3 + u + 1)$ $\cdot (u^{17} + u^{16} + \dots + 384u - 256)$
c_8	$(u+1)^9(u^8 - u^7 - 3u^6 + 2u^5 + 3u^4 - 2u - 1)$ $\cdot (u^{17} + 16u^{16} + \dots - 11u + 1)$
c_9	$u^9(u^8 - u^7 + \dots + 2u - 1)(u^{17} + u^{16} + \dots - 512u - 512)$
c_{10}	$(u-1)^9(u^8 + u^7 - 3u^6 - 2u^5 + 3u^4 + 2u - 1)$ $\cdot (u^{17} + 16u^{16} + \dots - 11u + 1)$
c_{11}	$(u^8 - 3u^7 + 7u^6 - 10u^5 + 11u^4 - 10u^3 + 6u^2 - 4u + 1)$ $\cdot (u^9 + 3u^8 + 8u^7 + 13u^6 + 17u^5 + 17u^4 + 12u^3 + 6u^2 + u - 1)$ $\cdot (u^{17} + 2u^{16} + \dots + 3u + 1)$
c_{12}	$(u^8 - u^7 - u^6 + 2u^5 + 17u^4 - 2u^3 + 2u - 1)$ $\cdot (u^9 + 3u^8 + 3u^7 - 2u^6 + u^5 - 9u^4 + 3u^3 + 2u - 1)$ $\cdot (u^{17} - 6u^{16} + \dots - 19686u + 2393)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y-1)^8(y^9 - y^8 + 12y^7 - 7y^6 + 37y^5 + y^4 - 10y^2 + 5y - 1)$ $\cdot (y^{17} - 57y^{16} + \dots - 7859y - 1)$
c_2, c_4	$(y-1)^8(y^9 - 5y^8 + 12y^7 - 15y^6 + 9y^5 + y^4 - 4y^3 + 2y^2 + y - 1)$ $\cdot (y^{17} - 37y^{16} + \dots + y - 1)$
c_3, c_7	$y^8(y^9 + 3y^8 + 8y^7 + 13y^6 + 17y^5 + 17y^4 + 12y^3 + 6y^2 + y - 1)$ $\cdot (y^{17} - 33y^{16} + \dots + 245760y - 65536)$
c_5, c_{11}	$(y^8 + 5y^7 + 11y^6 + 6y^5 - 17y^4 - 34y^3 - 22y^2 - 4y + 1)$ $\cdot (y^9 + 7y^8 + 20y^7 + 25y^6 + 5y^5 - 15y^4 + 22y^2 + 13y - 1)$ $\cdot (y^{17} + 12y^{16} + \dots + 25y - 1)$
c_6	$(y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1)$ $\cdot (y^9 + 6y^8 + \dots + 24y - 1)$ $\cdot (y^{17} - 45y^{16} + \dots + 806894237728y - 36947375089)$
c_8, c_{10}	$(y-1)^9(y^8 - 7y^7 + 19y^6 - 22y^5 + 3y^4 + 14y^3 - 6y^2 - 4y + 1)$ $\cdot (y^{17} - 40y^{16} + \dots + 221y - 1)$
c_9	$y^9(y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1)$ $\cdot (y^{17} - 39y^{16} + \dots + 3670016y - 262144)$
c_{12}	$(y^8 - 3y^7 + 7y^6 - 10y^5 + 11y^4 - 10y^3 + 6y^2 - 4y + 1)$ $\cdot (y^9 - 3y^8 + 23y^7 + 62y^6 - 13y^5 - 57y^4 + 9y^3 - 6y^2 + 4y - 1)$ $\cdot (y^{17} - 38y^{16} + \dots + 475084108y - 5726449)$