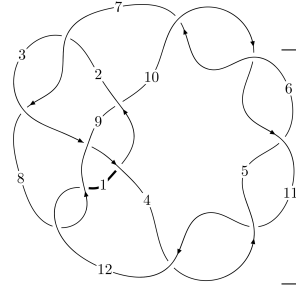
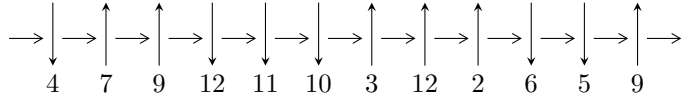


12n₀₈₅₆ (K12n₀₈₅₆)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -u^{15} - 5u^{14} + \dots + 2b - 4, -u^{15} - 4u^{14} + \dots + 2a + 1, u^{16} + 5u^{15} + \dots + 30u + 4 \rangle$$

$$I_2^u = \langle -74u^4a^3 + 62u^4a^2 + \dots + 20a - 170, 2u^4a^3 - 11u^4a + \dots - 23a - 23, u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1 \rangle$$

$$I_3^u = \langle -u^5 - u^4 - 3u^3 - 3u^2 + b - u - 1, u^8 + 7u^6 - u^5 + 15u^4 - 4u^3 + 10u^2 + a - 4u + 2, u^9 + 7u^7 + 16u^5 + 13u^3 + 3u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 45 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.

$$\langle -u^{15} - 5u^{14} + \dots + 2b - 4, -u^{15} - 4u^{14} + \dots + 2a + 1, u^{16} + 5u^{15} + \dots + 30u + 4 \rangle$$

I. $I_1^u =$

(i) Arc colorings

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

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

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

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

$$a_2 = \begin{pmatrix} \frac{1}{2}u^{15} + 2u^{14} + \dots - \frac{5}{2}u - \frac{1}{2} \\ \frac{1}{2}u^{15} + \frac{5}{2}u^{14} + \dots + \frac{25}{2}u + 2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u^{15} + \frac{9}{2}u^{14} + \dots + 32u + \frac{11}{2} \\ \frac{1}{2}u^{15} + \frac{5}{2}u^{14} + \dots + \frac{33}{2}u + 2 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} \frac{3}{4}u^{15} + \frac{13}{4}u^{14} + \dots + \frac{89}{4}u + 3 \\ -\frac{1}{2}u^{15} - \frac{5}{2}u^{14} + \dots - \frac{41}{2}u - 3 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^{15} - \frac{9}{2}u^{14} + \dots - 33u - \frac{9}{2} \\ -\frac{1}{2}u^{15} - \frac{5}{2}u^{14} + \dots - \frac{31}{2}u - 2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} \frac{1}{4}u^{15} + \frac{3}{4}u^{14} + \dots - \frac{33}{4}u - 1 \\ -\frac{1}{2}u^{15} - \frac{5}{2}u^{14} + \dots - \frac{39}{2}u - 3 \end{pmatrix}$$

(ii) Obstruction class = -1

$$\text{(iii) Cusp Shapes} = -u^{15} - 5u^{14} - 23u^{13} - 70u^{12} - 184u^{11} - 388u^{10} - 709u^9 - 1086u^8 - 1443u^7 - 1613u^6 - 1539u^5 - 1210u^4 - 775u^3 - 384u^2 - 138u - 26$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{16} - 15u^{15} + \dots - 128u + 32$
c_2, c_7, c_9	$u^{16} + u^{15} + \dots - 3u^2 + 1$
c_3, c_8, c_{12}	$u^{16} + 10u^{14} + \dots - u + 1$
c_4, c_5, c_6 c_{10}, c_{11}	$u^{16} + 5u^{15} + \dots + 30u + 4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{16} - 7y^{15} + \dots + 13824y + 1024$
c_2, c_7, c_9	$y^{16} - 13y^{15} + \dots - 6y + 1$
c_3, c_8, c_{12}	$y^{16} + 20y^{15} + \dots + 25y + 1$
c_4, c_5, c_6 c_{10}, c_{11}	$y^{16} + 21y^{15} + \dots + 116y + 16$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.623980 + 0.651550I$ $a = -0.423845 - 0.017311I$ $b = 0.571868 + 0.505425I$	$-1.44391 - 0.70743I$	$3.72290 + 0.24608I$
$u = -0.623980 - 0.651550I$ $a = -0.423845 + 0.017311I$ $b = 0.571868 - 0.505425I$	$-1.44391 + 0.70743I$	$3.72290 - 0.24608I$
$u = -0.463938 + 1.039450I$ $a = 0.077415 + 0.436847I$ $b = 0.01364 + 1.74946I$	$1.07382 + 9.25014I$	$4.41993 - 6.63902I$
$u = -0.463938 - 1.039450I$ $a = 0.077415 - 0.436847I$ $b = 0.01364 - 1.74946I$	$1.07382 - 9.25014I$	$4.41993 + 6.63902I$
$u = -0.740661 + 0.206858I$ $a = 1.043460 + 0.692415I$ $b = -0.181803 - 0.371994I$	$-2.76230 + 5.19350I$	$1.00902 - 5.12835I$
$u = -0.740661 - 0.206858I$ $a = 1.043460 - 0.692415I$ $b = -0.181803 + 0.371994I$	$-2.76230 - 5.19350I$	$1.00902 + 5.12835I$
$u = -0.128783 + 1.242080I$ $a = -0.456102 - 0.659720I$ $b = -0.214071 - 1.326220I$	$5.44979 + 1.79581I$	$4.75482 - 3.53630I$
$u = -0.128783 - 1.242080I$ $a = -0.456102 + 0.659720I$ $b = -0.214071 + 1.326220I$	$5.44979 - 1.79581I$	$4.75482 + 3.53630I$
$u = -0.16118 + 1.52906I$ $a = -0.619375 - 0.523872I$ $b = -0.733331 - 0.959617I$	$5.66087 + 2.21773I$	$8.32065 - 1.76776I$
$u = -0.16118 - 1.52906I$ $a = -0.619375 + 0.523872I$ $b = -0.733331 + 0.959617I$	$5.66087 - 2.21773I$	$8.32065 + 1.76776I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.210462 + 0.369049I$		
$a = 0.457557 - 0.529485I$	$0.056580 + 0.803599I$	$1.57400 - 8.67162I$
$b = 0.070506 + 0.348052I$		
$u = -0.210462 - 0.369049I$		
$a = 0.457557 + 0.529485I$	$0.056580 - 0.803599I$	$1.57400 + 8.67162I$
$b = 0.070506 - 0.348052I$		
$u = -0.13072 + 1.73050I$		
$a = -0.34920 - 2.38942I$	$10.8004 + 11.7066I$	$5.77296 - 5.44740I$
$b = 0.03210 - 3.29161I$		
$u = -0.13072 - 1.73050I$		
$a = -0.34920 + 2.38942I$	$10.8004 - 11.7066I$	$5.77296 + 5.44740I$
$b = 0.03210 + 3.29161I$		
$u = -0.04027 + 1.78867I$		
$a = 0.27009 + 1.91061I$	$16.5308 + 2.6330I$	$2.42571 - 2.64676I$
$b = -0.05891 + 2.52256I$		
$u = -0.04027 - 1.78867I$		
$a = 0.27009 - 1.91061I$	$16.5308 - 2.6330I$	$2.42571 + 2.64676I$
$b = -0.05891 - 2.52256I$		

$$\text{II. } I_2^u = \langle -74u^4a^3 + 62u^4a^2 + \dots + 20a - 170, 2u^4a^3 - 11u^4a + \dots - 23a - 23, u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_2 = \begin{pmatrix} 1.17460a^3u^4 - 0.984127a^2u^4 + \dots - 0.317460a + 2.69841 \\ a \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -0.206349a^3u^4 + 0.253968a^2u^4 + \dots + 1.92063a + 2.17460 \\ 1.65079a^3u^4 - 1.03175a^2u^4 + \dots - 2.36508a + 2.60317 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} 0.0634921a^3u^4 + 0.0793651a^2u^4 + \dots - 1.20635a - 0.507937 \\ 0.253968a^3u^4 - 0.634921a^2u^4 + \dots + 0.174603a + 4.06349 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -0.206349a^3u^4 + 0.253968a^2u^4 + \dots + 0.920635a + 2.17460 \\ \frac{2}{3}u^4a^3 - \frac{2}{3}u^4a^2 + \dots - \frac{2}{3}a + \frac{8}{3} \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0634921a^3u^4 + 0.682540a^2u^4 + \dots + 1.20635a + 0.0317460 \\ -0.253968a^3u^4 + 0.682540a^2u^4 + \dots - 0.174603a - 3.96825 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-4u^4 + 4u^3 - 16u^2 + 12u - 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$(u^2 + u - 1)^{10}$
c_2, c_7, c_9	$u^{20} + u^{19} + \dots - 62u - 89$
c_3, c_8, c_{12}	$u^{20} - u^{19} + \dots - 152u - 29$
c_4, c_5, c_6 c_{10}, c_{11}	$(u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1)^4$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$(y^2 - 3y + 1)^{10}$
c_2, c_7, c_9	$y^{20} - 9y^{19} + \dots - 42648y + 7921$
c_3, c_8, c_{12}	$y^{20} + 11y^{19} + \dots - 24612y + 841$
c_4, c_5, c_6 c_{10}, c_{11}	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.233677 + 0.885557I$ $a = -1.040300 - 0.283528I$ $b = -0.783355 + 0.908585I$	$5.76765 - 2.21397I$	$4.88568 + 4.22289I$
$u = 0.233677 + 0.885557I$ $a = 1.240690 + 0.223658I$ $b = -0.281646 + 0.312488I$	$-2.12804 - 2.21397I$	$4.88568 + 4.22289I$
$u = 0.233677 + 0.885557I$ $a = 0.775190 + 0.996664I$ $b = 0.95815 + 1.93963I$	$-2.12804 - 2.21397I$	$4.88568 + 4.22289I$
$u = 0.233677 + 0.885557I$ $a = 0.270298 - 0.182593I$ $b = 0.52495 - 1.76882I$	$5.76765 - 2.21397I$	$4.88568 + 4.22289I$
$u = 0.233677 - 0.885557I$ $a = -1.040300 + 0.283528I$ $b = -0.783355 - 0.908585I$	$5.76765 + 2.21397I$	$4.88568 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = 1.240690 - 0.223658I$ $b = -0.281646 - 0.312488I$	$-2.12804 + 2.21397I$	$4.88568 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = 0.775190 - 0.996664I$ $b = 0.95815 - 1.93963I$	$-2.12804 + 2.21397I$	$4.88568 - 4.22289I$
$u = 0.233677 - 0.885557I$ $a = 0.270298 + 0.182593I$ $b = 0.52495 + 1.76882I$	$5.76765 + 2.21397I$	$4.88568 - 4.22289I$
$u = 0.416284$ $a = -1.26489$ $b = 0.932768$	3.06566	-3.60880
$u = 0.416284$ $a = -1.99317 + 1.58726I$ $b = -0.739269 - 0.509493I$	-4.83002	-3.60880

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.416284$ $a = -1.99317 - 1.58726I$ $b = -0.739269 + 0.509493I$	-4.83002	-3.60880
$u = 0.416284$ $a = 2.78754$ $b = -0.368017$	3.06566	-3.60880
$u = 0.05818 + 1.69128I$ $a = 0.632434 - 0.451910I$ $b = 1.58486 - 0.66741I$	$7.01045 - 3.33174I$	$5.91874 + 2.36228I$
$u = 0.05818 + 1.69128I$ $a = 0.65235 - 1.40305I$ $b = 0.17965 - 2.05845I$	$14.9061 - 3.3317I$	$5.91874 + 2.36228I$
$u = 0.05818 + 1.69128I$ $a = -0.64368 + 2.64197I$ $b = -0.51264 + 3.62749I$	$14.9061 - 3.3317I$	$5.91874 + 2.36228I$
$u = 0.05818 + 1.69128I$ $a = -0.65514 - 2.79163I$ $b = -0.71308 - 3.44038I$	$7.01045 - 3.33174I$	$5.91874 + 2.36228I$
$u = 0.05818 - 1.69128I$ $a = 0.632434 + 0.451910I$ $b = 1.58486 + 0.66741I$	$7.01045 + 3.33174I$	$5.91874 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = 0.65235 + 1.40305I$ $b = 0.17965 + 2.05845I$	$14.9061 + 3.3317I$	$5.91874 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = -0.64368 - 2.64197I$ $b = -0.51264 - 3.62749I$	$14.9061 + 3.3317I$	$5.91874 - 2.36228I$
$u = 0.05818 - 1.69128I$ $a = -0.65514 + 2.79163I$ $b = -0.71308 + 3.44038I$	$7.01045 + 3.33174I$	$5.91874 - 2.36228I$

$$\text{III. } I_3^u = \langle -u^5 - u^4 - 3u^3 - 3u^2 + b - u - 1, u^8 + 7u^6 + \dots + a + 2, u^9 + 7u^7 + 16u^5 + 13u^3 + 3u + 1 \rangle$$

(i) Arc colorings

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

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

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

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

$$a_2 = \begin{pmatrix} -u^8 - 7u^6 + u^5 - 15u^4 + 4u^3 - 10u^2 + 4u - 2 \\ u^5 + u^4 + 3u^3 + 3u^2 + u + 1 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^8 - 6u^6 + u^5 - 11u^4 + 4u^3 - 7u^2 + 3u - 2 \\ u^6 + u^5 + 5u^4 + 4u^3 + 6u^2 + 2u + 1 \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} u^6 - u^5 + 5u^4 - 4u^3 + 7u^2 - 3u + 3 \\ -u^8 + u^7 - 6u^6 + 5u^5 - 11u^4 + 7u^3 - 6u^2 + 3u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^8 - 6u^6 + u^5 - 11u^4 + 4u^3 - 6u^2 + 4u - 1 \\ u^6 + u^5 + 4u^4 + 3u^3 + 4u^2 + u + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^5 + u^4 - 4u^3 + 4u^2 - 3u + 3 \\ u^7 - u^6 + 5u^5 - 4u^4 + 7u^3 - 3u^2 + 3u \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $4u^8 + 2u^7 + 24u^6 + 10u^5 + 44u^4 + 14u^3 + 25u^2 + 3u + 10$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^9 - 4u^8 + 6u^7 - 8u^6 + 13u^5 - 9u^4 + u^3 - 5u^2 + 3u + 3$
c_2, c_9	$u^9 + u^8 - 2u^7 - 2u^6 + u^5 + u^3 + 2u^2 + 1$
c_3, c_8	$u^9 + 2u^7 + u^6 + u^4 - 2u^3 - 2u^2 + u + 1$
c_4, c_5, c_6	$u^9 + 7u^7 + 16u^5 + 13u^3 + 3u + 1$
c_7	$u^9 - u^8 - 2u^7 + 2u^6 + u^5 + u^3 - 2u^2 - 1$
c_{10}, c_{11}	$u^9 + 7u^7 + 16u^5 + 13u^3 + 3u - 1$
c_{12}	$u^9 + 2u^7 - u^6 - u^4 - 2u^3 + 2u^2 + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^9 - 4y^8 - 2y^7 + 22y^6 + 3y^5 - 75y^4 + 37y^3 + 35y^2 + 39y - 9$
c_2, c_7, c_9	$y^9 - 5y^8 + 10y^7 - 6y^6 - 7y^5 + 8y^4 + 5y^3 - 4y^2 - 4y - 1$
c_3, c_8, c_{12}	$y^9 + 4y^8 + 4y^7 - 5y^6 - 8y^5 + 7y^4 + 6y^3 - 10y^2 + 5y - 1$
c_4, c_5, c_6 c_{10}, c_{11}	$y^9 + 14y^8 + 81y^7 + 250y^6 + 444y^5 + 458y^4 + 265y^3 + 78y^2 + 9y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.176178 + 1.056080I$ $a = -0.772923 - 0.371228I$ $b = -0.67471 - 1.53869I$	$7.25976 + 1.49693I$	$10.69582 - 1.07320I$
$u = -0.176178 - 1.056080I$ $a = -0.772923 + 0.371228I$ $b = -0.67471 + 1.53869I$	$7.25976 - 1.49693I$	$10.69582 + 1.07320I$
$u = 0.252500 + 0.604050I$ $a = 0.76253 + 1.27109I$ $b = -0.323758 + 0.973050I$	$-3.19201 - 0.85520I$	$1.77424 + 0.81850I$
$u = 0.252500 - 0.604050I$ $a = 0.76253 - 1.27109I$ $b = -0.323758 - 0.973050I$	$-3.19201 + 0.85520I$	$1.77424 - 0.81850I$
$u = 0.09972 + 1.60032I$ $a = 0.374760 - 1.005510I$ $b = 0.801978 - 1.133290I$	$4.49433 - 2.25221I$	$0.93167 + 1.22444I$
$u = 0.09972 - 1.60032I$ $a = 0.374760 + 1.005510I$ $b = 0.801978 + 1.133290I$	$4.49433 + 2.25221I$	$0.93167 - 1.22444I$
$u = -0.255288$ $a = -3.80617$ $b = 0.893478$	3.76466	10.8130
$u = -0.04840 + 1.76025I$ $a = 0.53872 + 2.02200I$ $b = 0.24975 + 2.75063I$	$17.5195 + 2.4733I$	$11.19170 - 0.90094I$
$u = -0.04840 - 1.76025I$ $a = 0.53872 - 2.02200I$ $b = 0.24975 - 2.75063I$	$17.5195 - 2.4733I$	$11.19170 + 0.90094I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2 + u - 1)^{10})(u^9 - 4u^8 + \dots + 3u + 3)$ $\cdot (u^{16} - 15u^{15} + \dots - 128u + 32)$
c_2, c_9	$(u^9 + u^8 + \dots + 2u^2 + 1)(u^{16} + u^{15} + \dots - 3u^2 + 1)$ $\cdot (u^{20} + u^{19} + \dots - 62u - 89)$
c_3, c_8	$(u^9 + 2u^7 + \dots + u + 1)(u^{16} + 10u^{14} + \dots - u + 1)$ $\cdot (u^{20} - u^{19} + \dots - 152u - 29)$
c_4, c_5, c_6	$(u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1)^4(u^9 + 7u^7 + 16u^5 + 13u^3 + 3u + 1)$ $\cdot (u^{16} + 5u^{15} + \dots + 30u + 4)$
c_7	$(u^9 - u^8 + \dots - 2u^2 - 1)(u^{16} + u^{15} + \dots - 3u^2 + 1)$ $\cdot (u^{20} + u^{19} + \dots - 62u - 89)$
c_{10}, c_{11}	$(u^5 - u^4 + 4u^3 - 3u^2 + 3u - 1)^4(u^9 + 7u^7 + 16u^5 + 13u^3 + 3u - 1)$ $\cdot (u^{16} + 5u^{15} + \dots + 30u + 4)$
c_{12}	$(u^9 + 2u^7 + \dots + u - 1)(u^{16} + 10u^{14} + \dots - u + 1)$ $\cdot (u^{20} - u^{19} + \dots - 152u - 29)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^2 - 3y + 1)^{10}$ $\cdot (y^9 - 4y^8 - 2y^7 + 22y^6 + 3y^5 - 75y^4 + 37y^3 + 35y^2 + 39y - 9)$ $\cdot (y^{16} - 7y^{15} + \dots + 13824y + 1024)$
c_2, c_7, c_9	$(y^9 - 5y^8 + 10y^7 - 6y^6 - 7y^5 + 8y^4 + 5y^3 - 4y^2 - 4y - 1)$ $\cdot (y^{16} - 13y^{15} + \dots - 6y + 1)(y^{20} - 9y^{19} + \dots - 42648y + 7921)$
c_3, c_8, c_{12}	$(y^9 + 4y^8 + 4y^7 - 5y^6 - 8y^5 + 7y^4 + 6y^3 - 10y^2 + 5y - 1)$ $\cdot (y^{16} + 20y^{15} + \dots + 25y + 1)(y^{20} + 11y^{19} + \dots - 24612y + 841)$
c_4, c_5, c_6 c_{10}, c_{11}	$(y^5 + 7y^4 + 16y^3 + 13y^2 + 3y - 1)^4$ $\cdot (y^9 + 14y^8 + 81y^7 + 250y^6 + 444y^5 + 458y^4 + 265y^3 + 78y^2 + 9y - 1)$ $\cdot (y^{16} + 21y^{15} + \dots + 116y + 16)$