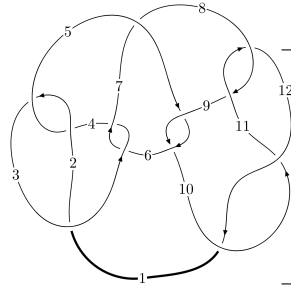
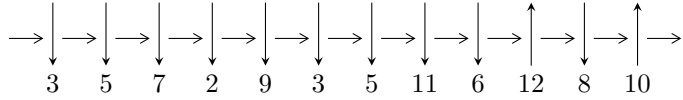


12n₀₀₆₈ (K12n₀₀₆₈)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -3.01211 \times 10^{31}u^{29} + 4.34016 \times 10^{31}u^{28} + \dots + 1.97066 \times 10^{30}b - 8.57936 \times 10^{32}, \\ 1.09509 \times 10^{30}u^{29} - 1.54101 \times 10^{30}u^{28} + \dots + 7.03808 \times 10^{28}a + 2.93651 \times 10^{31}, \\ u^{30} - 2u^{29} + \dots + 112u - 16 \rangle$$

$$I_2^u = \langle b + 1, -u^8 + 3u^6 + u^5 - 4u^4 - 2u^3 + u^2 + a + 2u + 1, u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1 \rangle$$

$$I_1^v = \langle a, -v^3 + 8b - 13, v^4 - 3v^3 + 8v^2 - 3v + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 43 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.

$$\text{I. } I_1^u = \langle -3.01 \times 10^{31}u^{29} + 4.34 \times 10^{31}u^{28} + \dots + 1.97 \times 10^{30}b - 8.58 \times 10^{32}, 1.10 \times 10^{30}u^{29} - 1.54 \times 10^{30}u^{28} + \dots + 7.04 \times 10^{28}a + 2.94 \times 10^{31}, u^{30} - 2u^{29} + \dots + 112u - 16 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_5 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_3 &= \begin{pmatrix} -15.5596u^{29} + 21.8953u^{28} + \dots + 2227.18u - 417.232 \\ 15.2848u^{29} - 22.0239u^{28} + \dots - 2273.81u + 435.354 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1 \\ u^2 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -114.601u^{29} + 164.616u^{28} + \dots + 17005.3u - 3254.00 \\ -12.2418u^{29} + 17.5529u^{28} + \dots + 1815.63u - 347.070 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -u \\ -u^3 + u \end{pmatrix} \\ a_2 &= \begin{pmatrix} -0.274795u^{29} - 0.128633u^{28} + \dots - 46.6332u + 18.1226 \\ 15.2848u^{29} - 22.0239u^{28} + \dots - 2273.81u + 435.354 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -114.601u^{29} + 164.616u^{28} + \dots + 17005.3u - 3254.00 \\ -24.1706u^{29} + 34.7409u^{28} + \dots + 3584.44u - 686.313 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 80.2622u^{29} - 115.883u^{28} + \dots - 12018.0u + 2311.90 \\ 28.2365u^{29} - 40.6686u^{28} + \dots - 4212.96u + 808.462 \end{pmatrix} \\ a_{12} &= \begin{pmatrix} -82.1322u^{29} + 117.960u^{28} + \dots + 12185.6u - 2331.50 \\ -46.3428u^{29} + 66.6043u^{28} + \dots + 6876.00u - 1316.29 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 120.629u^{29} - 173.452u^{28} + \dots - 17928.5u + 3434.03 \\ 58.6201u^{29} - 84.3267u^{28} + \dots - 8714.67u + 1669.08 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -102.359u^{29} + 147.063u^{28} + \dots + 15189.6u - 2906.93 \\ -12.2418u^{29} + 17.5529u^{28} + \dots + 1815.63u - 347.070 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

$$\text{(iii) Cusp Shapes} = 18.4364u^{29} - 27.2600u^{28} + \dots - 2861.01u + 546.175$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{30} + 52u^{29} + \dots + 28u + 1$
c_2, c_4	$u^{30} - 12u^{29} + \dots - 4u - 1$
c_3, c_6	$u^{30} + 3u^{29} + \dots - 1024u + 512$
c_5, c_9	$u^{30} + 2u^{29} + \dots - 112u - 16$
c_7	$u^{30} - 4u^{29} + \dots + 4u - 1$
c_8, c_{11}	$u^{30} - 4u^{29} + \dots + 4u + 1$
c_{10}, c_{12}	$u^{30} - 8u^{29} + \dots + 4u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{30} - 136y^{29} + \dots + 4192y + 1$
c_2, c_4	$y^{30} - 52y^{29} + \dots - 28y + 1$
c_3, c_6	$y^{30} - 63y^{29} + \dots - 1572864y + 262144$
c_5, c_9	$y^{30} - 30y^{29} + \dots - 2176y + 256$
c_7	$y^{30} - 68y^{29} + \dots - 16y + 1$
c_8, c_{11}	$y^{30} + 8y^{29} + \dots - 4y + 1$
c_{10}, c_{12}	$y^{30} + 32y^{29} + \dots - 428y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.715139 + 0.446335I$ $a = 0.637691 + 0.192313I$ $b = 0.206372 + 0.122164I$	$1.47077 + 1.88429I$	$-1.09736 - 4.74077I$
$u = -0.715139 - 0.446335I$ $a = 0.637691 - 0.192313I$ $b = 0.206372 - 0.122164I$	$1.47077 - 1.88429I$	$-1.09736 + 4.74077I$
$u = -0.520677 + 0.583530I$ $a = -1.10072 - 2.04738I$ $b = -1.225610 + 0.025926I$	$-2.38851 + 1.39225I$	$-9.42086 - 3.19191I$
$u = -0.520677 - 0.583530I$ $a = -1.10072 + 2.04738I$ $b = -1.225610 - 0.025926I$	$-2.38851 - 1.39225I$	$-9.42086 + 3.19191I$
$u = -1.297510 + 0.455237I$ $a = 0.389154 + 0.049150I$ $b = 0.517584 + 0.471630I$	$-4.40422 + 6.31187I$	$-8.00000 - 3.70826I$
$u = -1.297510 - 0.455237I$ $a = 0.389154 - 0.049150I$ $b = 0.517584 - 0.471630I$	$-4.40422 - 6.31187I$	$-8.00000 + 3.70826I$
$u = 1.350390 + 0.302093I$ $a = 0.402345 + 0.008016I$ $b = 0.436591 - 0.605380I$	$-5.03747 - 0.32171I$	$-10.46137 + 0.I$
$u = 1.350390 - 0.302093I$ $a = 0.402345 - 0.008016I$ $b = 0.436591 + 0.605380I$	$-5.03747 + 0.32171I$	$-10.46137 + 0.I$
$u = 0.458152 + 0.404118I$ $a = 0.901481 - 0.429883I$ $b = -0.568552 + 0.347997I$	$-0.690095 + 0.127607I$	$-9.90837 - 0.33008I$
$u = 0.458152 - 0.404118I$ $a = 0.901481 + 0.429883I$ $b = -0.568552 - 0.347997I$	$-0.690095 - 0.127607I$	$-9.90837 + 0.33008I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.355435 + 0.458702I$ $a = 0.191023 + 0.000486I$ $b = 1.63285 - 0.05553I$	$-8.72787 + 1.60808I$	$-9.05721 + 6.90396I$
$u = 0.355435 - 0.458702I$ $a = 0.191023 - 0.000486I$ $b = 1.63285 + 0.05553I$	$-8.72787 - 1.60808I$	$-9.05721 - 6.90396I$
$u = -0.043773 + 0.562236I$ $a = 1.55055 + 0.58614I$ $b = -0.101765 - 0.109648I$	$-0.46641 - 2.28721I$	$-1.63292 + 4.53779I$
$u = -0.043773 - 0.562236I$ $a = 1.55055 - 0.58614I$ $b = -0.101765 + 0.109648I$	$-0.46641 + 2.28721I$	$-1.63292 - 4.53779I$
$u = 0.562163 + 0.001137I$ $a = -4.72549 - 0.32287I$ $b = -0.951592 + 0.196609I$	$-1.29017 + 2.42994I$	$-20.9927 + 0.0895I$
$u = 0.562163 - 0.001137I$ $a = -4.72549 + 0.32287I$ $b = -0.951592 - 0.196609I$	$-1.29017 - 2.42994I$	$-20.9927 - 0.0895I$
$u = 0.485715$ $a = 0.919058$ $b = -0.317479$	-0.783101	-12.6230
$u = 1.54469 + 0.29004I$ $a = 1.71848 - 0.49046I$ $b = 1.98426 + 0.12684I$	$-13.3728 - 4.6597I$	0
$u = 1.54469 - 0.29004I$ $a = 1.71848 + 0.49046I$ $b = 1.98426 - 0.12684I$	$-13.3728 + 4.6597I$	0
$u = 0.12715 + 1.72473I$ $a = 0.181586 + 0.001643I$ $b = 2.07079 - 0.05873I$	$-16.8261 + 3.2961I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.12715 - 1.72473I$ $a = 0.181586 - 0.001643I$ $b = 2.07079 + 0.05873I$	$-16.8261 - 3.2961I$	0
$u = 1.75662 + 0.28335I$ $a = -0.969045 + 0.338183I$ $b = -1.39226 - 0.94810I$	$-10.34510 - 5.56831I$	0
$u = 1.75662 - 0.28335I$ $a = -0.969045 - 0.338183I$ $b = -1.39226 + 0.94810I$	$-10.34510 + 5.56831I$	0
$u = -1.78192$ $a = 1.50256$ $b = 2.09847$	-17.8492	0
$u = -1.78762 + 0.03529I$ $a = -0.998109 - 0.180287I$ $b = -1.51752 + 0.83695I$	$-10.57970 - 1.09876I$	0
$u = -1.78762 - 0.03529I$ $a = -0.998109 + 0.180287I$ $b = -1.51752 - 0.83695I$	$-10.57970 + 1.09876I$	0
$u = 1.61551 + 0.87429I$ $a = 1.026870 - 0.855426I$ $b = 1.96767 + 0.40947I$	$18.1572 - 12.2530I$	0
$u = 1.61551 - 0.87429I$ $a = 1.026870 + 0.855426I$ $b = 1.96767 - 0.40947I$	$18.1572 + 12.2530I$	0
$u = -1.75729 + 0.77336I$ $a = 1.083390 + 0.694936I$ $b = 2.05068 - 0.37214I$	$16.9360 + 5.5790I$	0
$u = -1.75729 - 0.77336I$ $a = 1.083390 - 0.694936I$ $b = 2.05068 + 0.37214I$	$16.9360 - 5.5790I$	0

$$\text{II. } I_2^u = \langle b + 1, -u^8 + 3u^6 + u^5 - 4u^4 - 2u^3 + u^2 + a + 2u + 1, u^9 + u^8 - 2u^7 - 3u^6 + u^5 + 3u^4 + 2u^3 - u - 1 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

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

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

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

$$a_1 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^8 - 3u^6 - u^5 + 4u^4 + 2u^3 - u^2 - 2u - 1 \\ -1 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} -u^4 + u^2 - 1 \\ -u^6 + 2u^4 - u^2 \end{pmatrix}$$

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

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

(ii) Obstruction class = 1

(iii) Cusp Shapes = $u^8 - 2u^7 - 2u^6 + 3u^5 + 6u^4 - 3u^3 - 3u^2 - 4u - 10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.772920 + 0.510351I$ $a = -0.457852 - 1.072010I$ $b = -1.00000$	$0.13850 + 2.09337I$	$-8.93344 - 3.71284I$
$u = -0.772920 - 0.510351I$ $a = -0.457852 + 1.072010I$ $b = -1.00000$	$0.13850 - 2.09337I$	$-8.93344 + 3.71284I$
$u = 0.825933$ $a = -1.46592$ $b = -1.00000$	-2.84338	-14.0380
$u = 1.173910 + 0.391555I$ $a = -0.522253 + 0.392004I$ $b = -1.00000$	$-6.01628 - 1.33617I$	$-14.5101 + 2.5441I$
$u = 1.173910 - 0.391555I$ $a = -0.522253 - 0.392004I$ $b = -1.00000$	$-6.01628 + 1.33617I$	$-14.5101 - 2.5441I$
$u = -0.141484 + 0.739668I$ $a = 1.63880 - 0.65075I$ $b = -1.00000$	$-2.26187 - 2.45442I$	$-7.83172 + 1.00072I$
$u = -0.141484 - 0.739668I$ $a = 1.63880 + 0.65075I$ $b = -1.00000$	$-2.26187 + 2.45442I$	$-7.83172 - 1.00072I$
$u = -1.172470 + 0.500383I$ $a = -0.425734 - 0.444312I$ $b = -1.00000$	$-5.24306 + 7.08493I$	$-13.7057 - 8.1735I$
$u = -1.172470 - 0.500383I$ $a = -0.425734 + 0.444312I$ $b = -1.00000$	$-5.24306 - 7.08493I$	$-13.7057 + 8.1735I$

$$\text{III. } I_1^v = \langle a, -v^3 + 8b - 13, v^4 - 3v^3 + 8v^2 - 3v + 1 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} v \\ 0 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0 \\ \frac{1}{8}v^3 + \frac{13}{8} \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 1 \\ \frac{1}{8}v^3 + \frac{21}{8} \end{pmatrix}$$

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

$$a_2 = \begin{pmatrix} \frac{1}{8}v^3 + \frac{13}{8} \\ \frac{1}{8}v^3 + \frac{13}{8} \end{pmatrix}$$

$$a_1 = \begin{pmatrix} \frac{1}{8}v^3 + \frac{13}{8} \\ -\frac{1}{8}v^3 - \frac{21}{8} \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -\frac{1}{8}v^3 - \frac{13}{8} \\ -\frac{1}{8}v^3 - \frac{21}{8} \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} \frac{1}{4}v^3 + v + \frac{5}{4} \\ -\frac{1}{8}v^3 - \frac{21}{8} \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{7}{8}v^3 - 2v^2 + 6v - \frac{5}{8} \\ -\frac{9}{8}v^3 + 3v^2 - 8v + \frac{3}{8} \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -\frac{1}{8}v^3 - \frac{13}{8} \\ \frac{1}{8}v^3 + \frac{21}{8} \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $-\frac{9}{2}v^3 + 13v^2 - 33v - \frac{17}{2}$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$v = 0.190983 + 0.330792I$ $a = 0$ $b = 1.61803$	$-8.88264 + 2.02988I$	$-15.5000 - 9.2736I$
$v = 0.190983 - 0.330792I$ $a = 0$ $b = 1.61803$	$-8.88264 - 2.02988I$	$-15.5000 + 9.2736I$
$v = 1.30902 + 2.26728I$ $a = 0$ $b = -0.618034$	$-0.98696 + 2.02988I$	$-15.5000 + 2.3454I$
$v = 1.30902 - 2.26728I$ $a = 0$ $b = -0.618034$	$-0.98696 - 2.02988I$	$-15.5000 - 2.3454I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^9)(u^2-3u+1)^2(u^{30}+52u^{29}+\dots+28u+1)$
c_2	$((u-1)^9)(u^2+u-1)^2(u^{30}-12u^{29}+\dots-4u-1)$
c_3	$u^9(u^2+u-1)^2(u^{30}+3u^{29}+\dots-1024u+512)$
c_4	$((u+1)^9)(u^2-u-1)^2(u^{30}-12u^{29}+\dots-4u-1)$
c_5	$u^4(u^9+u^8-2u^7-3u^6+u^5+3u^4+2u^3-u-1)$ $\cdot (u^{30}+2u^{29}+\dots-112u-16)$
c_6	$u^9(u^2-u-1)^2(u^{30}+3u^{29}+\dots-1024u+512)$
c_7	$((u^2+3u+1)^2)(u^9+5u^8+\dots+u+1)$ $\cdot (u^{30}-4u^{29}+\dots+4u-1)$
c_8	$(u^2-u+1)^2(u^9+u^8+2u^7+u^6+3u^5+u^4+2u^3+u-1)$ $\cdot (u^{30}-4u^{29}+\dots+4u+1)$
c_9	$u^4(u^9-u^8-2u^7+3u^6+u^5-3u^4+2u^3-u+1)$ $\cdot (u^{30}+2u^{29}+\dots-112u-16)$
c_{10}	$(u^2+u+1)^2$ $\cdot (u^9+3u^8+8u^7+13u^6+17u^5+17u^4+12u^3+6u^2+u-1)$ $\cdot (u^{30}-8u^{29}+\dots+4u+1)$
c_{11}	$(u^2+u+1)^2(u^9-u^8+2u^7-u^6+3u^5-u^4+2u^3+u+1)$ $\cdot (u^{30}-4u^{29}+\dots+4u+1)$
c_{12}	$(u^2-u+1)^2$ $\cdot (u^9-3u^8+8u^7-13u^6+17u^5-17u^4+12u^3-6u^2+u+1)$ $\cdot (u^{30}-8u^{29}+\dots+4u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^9)(y^2-7y+1)^2(y^{30}-136y^{29}+\dots+4192y+1)$
c_2, c_4	$((y-1)^9)(y^2-3y+1)^2(y^{30}-52y^{29}+\dots-28y+1)$
c_3, c_6	$y^9(y^2-3y+1)^2(y^{30}-63y^{29}+\dots-1572864y+262144)$
c_5, c_9	$y^4(y^9-5y^8+12y^7-15y^6+9y^5+y^4-4y^3+2y^2+y-1)$ $\cdot (y^{30}-30y^{29}+\dots-2176y+256)$
c_7	$(y^2-7y+1)^2(y^9-y^8+12y^7-7y^6+37y^5+y^4-10y^2+5y-1)$ $\cdot (y^{30}-68y^{29}+\dots-16y+1)$
c_8, c_{11}	$(y^2+y+1)^2$ $\cdot (y^9+3y^8+8y^7+13y^6+17y^5+17y^4+12y^3+6y^2+y-1)$ $\cdot (y^{30}+8y^{29}+\dots-4y+1)$
c_{10}, c_{12}	$((y^2+y+1)^2)(y^9+7y^8+\dots+13y-1)$ $\cdot (y^{30}+32y^{29}+\dots-428y+1)$