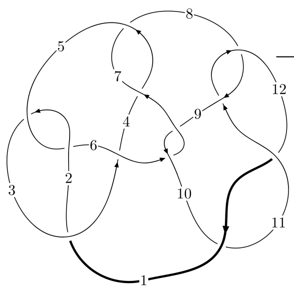
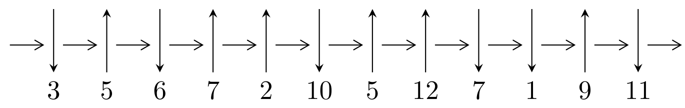
$12n_{0018}$ ($K12n_{0018}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

Ideals for irreducible components[2] of $X_{\mathbf{par}}$

$$\begin{aligned}
I_1^u = \langle & 2.62383 \times 10^{39} u^{61} - 1.19751 \times 10^{40} u^{60} + \cdots + 3.98732 \times 10^{38} b - 9.31049 \times 10^{39}, \\
& - 3.15003 \times 10^{39} u^{61} + 1.51549 \times 10^{40} u^{60} + \cdots + 1.99366 \times 10^{38} a + 1.87829 \times 10^{40}, \\
& u^{62} - 5u^{61} + \cdots - 19u + 1 \rangle \\
I_2^u = \langle & a^3 u + a^3 - 2a^2 - 3au + b - a + u + 1,\ a^4 + 2a^3 u - 3a^2 u - 3a^2 + a + u,\ u^2 + u + 1 \rangle
\end{aligned}$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 70 representations.

[1] The 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`).

[2] All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

I. $\boldsymbol{I_1^u = \langle 2.62 \times 10^{39} u^{61} - 1.20 \times 10^{40} u^{60} + \cdots + 3.99 \times 10^{38} b - 9.31 \times 10^{39},\ -3.15 \times 10^{39} u^{61} + 1.52 \times 10^{40} u^{60} + \cdots + 1.99 \times 10^{38} a + 1.88 \times 10^{40},\ u^{62} - 5u^{61} + \cdots - 19u + 1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 15.8002u^{61} - 76.0156u^{60} + \cdots + 1227.65u - 94.2130 \\ -6.58044u^{61} + 30.0330u^{60} + \cdots - 304.461u + 23.3502 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -15.9053u^{61} + 77.9924u^{60} + \cdots - 1333.00u + 105.025 \\ 8.30759u^{61} - 33.2844u^{60} + \cdots + 178.838u - 14.4250 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 19.2096u^{61} - 92.8297u^{60} + \cdots + 1541.75u - 118.551 \\ -8.39084u^{61} + 37.4877u^{60} + \cdots - 309.379u + 23.5628 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 23.0925u^{61} - 111.738u^{60} + \cdots + 1863.68u - 145.752 \\ -10.1051u^{61} + 43.0078u^{60} + \cdots - 361.476u + 28.7800 \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 15.5897u^{61} - 75.0040u^{60} + \cdots + 1258.28u - 100.587 \\ -1.52637u^{61} + 10.2099u^{60} + \cdots - 153.436u + 11.8910 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 15.9053u^{61} - 77.9924u^{60} + \cdots + 1333.00u - 105.025 \\ -10.5447u^{61} + 39.2440u^{60} + \cdots - 192.085u + 15.9594 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= 32.0809u^{61} - 157.631u^{60} + \cdots + 2379.84u - 187.341$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{62} + 33u^{61} + \cdots - 77u + 1$
c_2, c_5	$u^{62} + 5u^{61} + \cdots + 19u + 1$
c_3	$u^{62} - 5u^{61} + \cdots + 28315u + 1921$
c_4, c_7	$u^{62} + 5u^{61} + \cdots - 1152u + 256$
c_6, c_9	$u^{62} - 3u^{61} + \cdots - 3u + 1$
c_8, c_{11}	$u^{62} + 3u^{61} + \cdots - 5u + 1$
c_{10}, c_{12}	$u^{62} + 23u^{61} + \cdots + 11u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{62} - 3y^{61} + \cdots - 3593y + 1$
c_2, c_5	$y^{62} + 33y^{61} + \cdots - 77y + 1$
c_3	$y^{62} - 39y^{61} + \cdots - 237987197y + 3690241$
c_4, c_7	$y^{62} + 45y^{61} + \cdots + 1261568y + 65536$
c_6, c_9	$y^{62} + 15y^{61} + \cdots + 11y + 1$
c_8, c_{11}	$y^{62} + 23y^{61} + \cdots + 11y + 1$
c_{10}, c_{12}	$y^{62} + 35y^{61} + \cdots - 185y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.965704 + 0.297719I$ $a = -1.43043 - 0.52995I$ $b = -0.306577 + 0.174570I$	$-1.29157 - 10.33450I$	0
$u = 0.965704 - 0.297719I$ $a = -1.43043 + 0.52995I$ $b = -0.306577 - 0.174570I$	$-1.29157 + 10.33450I$	0
$u = -0.411885 + 0.945709I$ $a = -2.27569 + 1.18972I$ $b = -1.71285 + 1.28141I$	$-0.55472 - 4.37820I$	0
$u = -0.411885 - 0.945709I$ $a = -2.27569 - 1.18972I$ $b = -1.71285 - 1.28141I$	$-0.55472 + 4.37820I$	0
$u = -0.508605 + 0.906380I$ $a = 2.86917 - 1.37868I$ $b = 2.47102 - 1.51786I$	$-0.017864 - 0.355429I$	0
$u = -0.508605 - 0.906380I$ $a = 2.86917 + 1.37868I$ $b = 2.47102 + 1.51786I$	$-0.017864 + 0.355429I$	0
$u = 0.892742 + 0.303283I$ $a = 1.40786 + 0.50551I$ $b = 0.211520 - 0.223149I$	$0.27929 - 4.71522I$	0
$u = 0.892742 - 0.303283I$ $a = 1.40786 - 0.50551I$ $b = 0.211520 + 0.223149I$	$0.27929 + 4.71522I$	0
$u = -0.930590 + 0.096301I$ $a = 0.057491 - 0.985327I$ $b = -0.005994 - 0.189910I$	$3.48850 - 2.47160I$	$10.13177 + 3.68218I$
$u = -0.930590 - 0.096301I$ $a = 0.057491 + 0.985327I$ $b = -0.005994 + 0.189910I$	$3.48850 + 2.47160I$	$10.13177 - 3.68218I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.374481 + 0.850793I$ $a = -0.743628 + 0.575009I$ $b = 0.77387 + 1.47048I$	$6.46808 + 4.86140I$	0
$u = 0.374481 - 0.850793I$ $a = -0.743628 - 0.575009I$ $b = 0.77387 - 1.47048I$	$6.46808 - 4.86140I$	0
$u = 0.891739 + 0.124753I$ $a = -1.43390 - 0.46536I$ $b = -0.330798 + 0.437779I$	$-5.82429 - 3.24893I$	$-2.83073 + 2.56223I$
$u = 0.891739 - 0.124753I$ $a = -1.43390 + 0.46536I$ $b = -0.330798 - 0.437779I$	$-5.82429 + 3.24893I$	$-2.83073 - 2.56223I$
$u = -0.531933 + 0.965807I$ $a = 0.024523 - 1.037090I$ $b = 0.21487 - 1.50621I$	$-0.14262 - 2.78903I$	0
$u = -0.531933 - 0.965807I$ $a = 0.024523 + 1.037090I$ $b = 0.21487 + 1.50621I$	$-0.14262 + 2.78903I$	0
$u = 0.382543 + 0.801832I$ $a = 0.843253 - 0.451303I$ $b = -0.78761 - 1.22730I$	$6.61497 - 1.56581I$	$0. + 8.95092I$
$u = 0.382543 - 0.801832I$ $a = 0.843253 + 0.451303I$ $b = -0.78761 + 1.22730I$	$6.61497 + 1.56581I$	$0. - 8.95092I$
$u = -0.480114 + 0.743056I$ $a = 2.00911 - 1.21894I$ $b = 1.67487 - 1.75063I$	$0.46926 - 3.71058I$	$-6.23280 + 11.34763I$
$u = -0.480114 - 0.743056I$ $a = 2.00911 + 1.21894I$ $b = 1.67487 + 1.75063I$	$0.46926 + 3.71058I$	$-6.23280 - 11.34763I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.094130+0.841210I$ $a=-1.51231+1.09297I$ $b=-0.499665+1.237070I$	$-1.62196+1.23455I$	$-2.69106-2.17099I$
$u=-0.094130-0.841210I$ $a=-1.51231-1.09297I$ $b=-0.499665-1.237070I$	$-1.62196-1.23455I$	$-2.69106+2.17099I$
$u=-0.257077+1.145650I$ $a=-0.587485+0.772224I$ $b=-0.87373+1.43182I$	$-3.22451-2.34711I$	0
$u=-0.257077-1.145650I$ $a=-0.587485-0.772224I$ $b=-0.87373-1.43182I$	$-3.22451+2.34711I$	0
$u=-0.900002+0.754167I$ $a=0.124095-0.287439I$ $b=-0.145127+0.264679I$	$2.84220-0.80883I$	0
$u=-0.900002-0.754167I$ $a=0.124095+0.287439I$ $b=-0.145127-0.264679I$	$2.84220+0.80883I$	0
$u=-0.475785+0.628202I$ $a=1.193400-0.639563I$ $b=0.566847-0.143962I$	$0.84056-1.37461I$	$5.29052+4.27881I$
$u=-0.475785-0.628202I$ $a=1.193400+0.639563I$ $b=0.566847+0.143962I$	$0.84056+1.37461I$	$5.29052-4.27881I$
$u=0.442572+1.154760I$ $a=0.043171+0.738046I$ $b=-0.93124+1.40738I$	$-3.45908+2.42252I$	0
$u=0.442572-1.154760I$ $a=0.043171-0.738046I$ $b=-0.93124-1.40738I$	$-3.45908-2.42252I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.745927 + 0.110754I$ $a = -1.277990 + 0.457571I$ $b = -0.255752 - 0.786572I$	$-1.84493 - 3.74840I$	$0.35274 + 2.59409I$
$u = 0.745927 - 0.110754I$ $a = -1.277990 - 0.457571I$ $b = -0.255752 + 0.786572I$	$-1.84493 + 3.74840I$	$0.35274 - 2.59409I$
$u = 0.468807 + 1.155530I$ $a = -0.152066 + 1.342220I$ $b = 0.48466 + 2.34406I$	$-3.26706 + 5.72300I$	0
$u = 0.468807 - 1.155530I$ $a = -0.152066 - 1.342220I$ $b = 0.48466 - 2.34406I$	$-3.26706 - 5.72300I$	0
$u = 0.406251 + 1.185420I$ $a = 0.29707 - 1.44572I$ $b = -0.37469 - 2.34822I$	$-5.55349 + 0.20577I$	0
$u = 0.406251 - 1.185420I$ $a = 0.29707 + 1.44572I$ $b = -0.37469 + 2.34822I$	$-5.55349 - 0.20577I$	0
$u = -0.893686 + 0.884980I$ $a = 0.0151757 + 0.0943643I$ $b = 0.275198 - 0.425254I$	$2.47898 - 5.65478I$	0
$u = -0.893686 - 0.884980I$ $a = 0.0151757 - 0.0943643I$ $b = 0.275198 + 0.425254I$	$2.47898 + 5.65478I$	0
$u = 0.236000 + 1.238430I$ $a = -0.245273 + 0.777145I$ $b = -0.93517 + 1.48259I$	$-4.87637 - 1.25419I$	0
$u = 0.236000 - 1.238430I$ $a = -0.245273 - 0.777145I$ $b = -0.93517 - 1.48259I$	$-4.87637 + 1.25419I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.331100+0.640866I$ $a=-1.73450+0.49909I$ $b=-1.35558+1.35491I$	$0.414871+0.997099I$	$-2.34753+0.60698I$
$u=-0.331100-0.640866I$ $a=-1.73450-0.49909I$ $b=-1.35558-1.35491I$	$0.414871-0.997099I$	$-2.34753-0.60698I$
$u=\ \ 0.493150+1.180330I$ $a=-0.100543-0.798998I$ $b=\ \ 0.89247-1.38242I$	$-4.93269+8.34798I$	0
$u=\ \ 0.493150-1.180330I$ $a=-0.100543+0.798998I$ $b=\ \ 0.89247+1.38242I$	$-4.93269-8.34798I$	0
$u=-0.576496+1.167110I$ $a=\ \ 0.393868-0.624631I$ $b=\ \ 0.650024-1.142500I$	$0.37776-2.87804I$	0
$u=-0.576496-1.167110I$ $a=\ \ 0.393868+0.624631I$ $b=\ \ 0.650024+1.142500I$	$0.37776+2.87804I$	0
$u=\ \ 0.594113+1.186310I$ $a=\ \ 0.175111+1.386080I$ $b=\ \ 0.62258+2.42837I$	$-2.39832+10.17330I$	0
$u=\ \ 0.594113-1.186310I$ $a=\ \ 0.175111-1.386080I$ $b=\ \ 0.62258-2.42837I$	$-2.39832-10.17330I$	0
$u=\ \ 0.376293+1.276620I$ $a=\ \ 0.095158-0.866722I$ $b=\ \ 0.90036-1.47315I$	$-10.22650+1.13523I$	0
$u=\ \ 0.376293-1.276620I$ $a=\ \ 0.095158+0.866722I$ $b=\ \ 0.90036+1.47315I$	$-10.22650-1.13523I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.524584 + 1.228200I$ $a = -0.01293 - 1.50624I$ $b = -0.52627 - 2.46501I$	$-9.15566 + 8.36279I$	0
$u = 0.524584 - 1.228200I$ $a = -0.01293 + 1.50624I$ $b = -0.52627 + 2.46501I$	$-9.15566 - 8.36279I$	0
$u = 0.217473 + 1.339040I$ $a = 0.291562 - 0.877888I$ $b = 0.94031 - 1.49949I$	$-6.91925 - 6.39307I$	0
$u = 0.217473 - 1.339040I$ $a = 0.291562 + 0.877888I$ $b = 0.94031 + 1.49949I$	$-6.91925 + 6.39307I$	0
$u = 0.616616 + 1.212360I$ $a = -0.23484 - 1.44633I$ $b = -0.64668 - 2.46160I$	$-4.0936 + 16.0686I$	0
$u = 0.616616 - 1.212360I$ $a = -0.23484 + 1.44633I$ $b = -0.64668 + 2.46160I$	$-4.0936 - 16.0686I$	0
$u = -0.506958 + 1.275800I$ $a = -0.538448 + 0.655638I$ $b = -0.82392 + 1.18632I$	$-0.59026 - 7.53314I$	0
$u = -0.506958 - 1.275800I$ $a = -0.538448 - 0.655638I$ $b = -0.82392 - 1.18632I$	$-0.59026 + 7.53314I$	0
$u = 0.616968 + 0.058257I$ $a = 1.42943 + 0.57487I$ $b = 0.066901 - 0.636161I$	$-0.28090 - 1.52056I$	$2.54136 + 2.72708I$
$u = 0.616968 - 0.058257I$ $a = 1.42943 - 0.57487I$ $b = 0.066901 + 0.636161I$	$-0.28090 + 1.52056I$	$2.54136 - 2.72708I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.152397 + 0.009114I$ $a = 3.01058 + 2.43110I$ $b = -0.233834 - 0.560896I$	$-0.056975 - 1.373480I$	$-0.36734 + 4.59681I$
$u = 0.152397 - 0.009114I$ $a = 3.01058 - 2.43110I$ $b = -0.233834 + 0.560896I$	$-0.056975 + 1.373480I$	$-0.36734 - 4.59681I$

II.

$\boldsymbol{I^u_2 = \langle a^3u+a^3-2a^2-3au+b-a+u+1,\ a^4+2a^3u-3a^2u-3a^2+a+u,\ u^2+u+1\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\u+1\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}a\\-a^3u-a^3+2a^2+3au+a-u-1\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\-a^3u-a^3+a^2+au+2u+2\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-u\\-u\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-a^3u+2a^2u+2a^2-2a-u\\-2a^3u-a^3+2a^2u+4a^2+3au-2a-2u-1\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}a\\a^3u+a^3-3a^2-4au+a+2u+2\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}-a^3u+a^2u+a^2-a\\-2a^3u-a^3+a^2u+2a^2+au-a+2u+2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\-a^3u-a^3+a^2+au+2u+2\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -a^3u-3a^3-3a^2u+a^2-3a+9u+10$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = 0.576953 + 0.283088I$ $b = -0.819983 + 0.968508I$	$6.79074 - 5.19385I$	$8.12668 + 10.02124I$
$u = -0.500000 + 0.866025I$ $a = -0.533637 - 0.358112I$ $b = 0.75842 - 1.22518I$	$6.79074 + 1.13408I$	$5.34148 + 6.40875I$
$u = -0.500000 + 0.866025I$ $a = -0.58443 - 1.44211I$ $b = -0.34305 - 2.03771I$	$-0.21101 - 3.44499I$	$-0.01166 + 14.06194I$
$u = -0.500000 + 0.866025I$ $a = 1.54112 - 0.21492I$ $b = 0.904615 - 0.303685I$	$-0.211005 - 0.614778I$	$-4.95650 + 1.55100I$
$u = -0.500000 - 0.866025I$ $a = 0.576953 - 0.283088I$ $b = -0.819983 - 0.968508I$	$6.79074 + 5.19385I$	$8.12668 - 10.02124I$
$u = -0.500000 - 0.866025I$ $a = -0.533637 + 0.358112I$ $b = 0.75842 + 1.22518I$	$6.79074 - 1.13408I$	$5.34148 - 6.40875I$
$u = -0.500000 - 0.866025I$ $a = -0.58443 + 1.44211I$ $b = -0.34305 + 2.03771I$	$-0.21101 + 3.44499I$	$-0.01166 - 14.06194I$
$u = -0.500000 - 0.866025I$ $a = 1.54112 + 0.21492I$ $b = 0.904615 + 0.303685I$	$-0.211005 + 0.614778I$	$-4.95650 - 1.55100I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u^2-u+1)^4)(u^{62}+33u^{61}+\cdots-77u+1)$
c_2	$((u^2+u+1)^4)(u^{62}+5u^{61}+\cdots+19u+1)$
c_3	$((u^2-u+1)^4)(u^{62}-5u^{61}+\cdots+28315u+1921)$
c_4, c_7	$u^8(u^{62}+5u^{61}+\cdots-1152u+256)$
c_5	$((u^2-u+1)^4)(u^{62}+5u^{61}+\cdots+19u+1)$
c_6	$((u^4-u^3+3u^2-2u+1)^2)(u^{62}-3u^{61}+\cdots-3u+1)$
c_8	$((u^4-u^3+u^2+1)^2)(u^{62}+3u^{61}+\cdots-5u+1)$
c_9	$((u^4+u^3+3u^2+2u+1)^2)(u^{62}-3u^{61}+\cdots-3u+1)$
c_{10}	$((u^4-u^3+3u^2-2u+1)^2)(u^{62}+23u^{61}+\cdots+11u+1)$
c_{11}	$((u^4+u^3+u^2+1)^2)(u^{62}+3u^{61}+\cdots-5u+1)$
c_{12}	$((u^4+u^3+3u^2+2u+1)^2)(u^{62}+23u^{61}+\cdots+11u+1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y^2+y+1)^4)(y^{62}-3y^{61}+\cdots-3593y+1)$
c_2, c_5	$((y^2+y+1)^4)(y^{62}+33y^{61}+\cdots-77y+1)$
c_3	$((y^2+y+1)^4)(y^{62}-39y^{61}+\cdots-2.37987\times 10^8 y+3690241)$
c_4, c_7	$y^8(y^{62}+45y^{61}+\cdots+1261568y+65536)$
c_6, c_9	$((y^4+5y^3+7y^2+2y+1)^2)(y^{62}+15y^{61}+\cdots+11y+1)$
c_8, c_{11}	$((y^4+y^3+3y^2+2y+1)^2)(y^{62}+23y^{61}+\cdots+11y+1)$
c_{10}, c_{12}	$((y^4+5y^3+7y^2+2y+1)^2)(y^{62}+35y^{61}+\cdots-185y+1)$