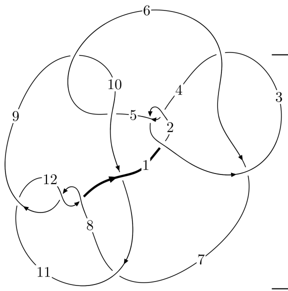
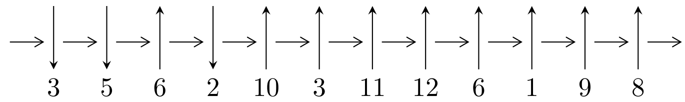
$12n_{0109}$ ($K12n_{0109}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle 6.35220 \times 10^{79} u^{55} + 2.03304 \times 10^{79} u^{54} + \cdots + 6.01137 \times 10^{80} b + 5.14680 \times 10^{80},$$
$$- 6.55161 \times 10^{79} u^{55} - 5.38999 \times 10^{80} u^{54} + \cdots + 6.01137 \times 10^{80} a - 2.37369 \times 10^{81},\ u^{56} + 2u^{55} + \cdots - u -$$
$$I_2^u = \langle b + 1,\ -2u^2 + a + u - 4,\ u^3 + 2u + 1 \rangle$$
$$I_3^u = \langle b + 1,\ 2u^3 - u^2 + a + 3u - 2,\ u^4 - u^3 + 2u^2 - 2u + 1 \rangle$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 63 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.

$\boldsymbol{I_1^u = \langle 6.35\times10^{79}u^{55}+2.03\times10^{79}u^{54}+\cdots+6.01\times10^{80}b+5.15\times10^{80},\ -6.55\times10^{79}u^{55}-5.39\times10^{80}u^{54}+\cdots+6.01\times10^{80}a-2.37\times10^{81},\ u^{56}+2u^{55}+\cdots-u-1\rangle}$

(i) Arc colorings

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

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

$$a_3 = \begin{pmatrix}0.108987u^{55}+0.896633u^{54}+\cdots+0.394522u+3.94866\\-0.105670u^{55}-0.0338199u^{54}+\cdots-0.859496u-0.856178\end{pmatrix}$$

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

$$a_7 = \begin{pmatrix}-0.146691u^{55}+0.118799u^{54}+\cdots-1.49357u-0.175836\\-0.0587371u^{55}-0.170653u^{54}+\cdots-0.0940050u-0.334345\end{pmatrix}$$

$$a_2 = \begin{pmatrix}0.00331723u^{55}+0.862813u^{54}+\cdots-0.464973u+3.09249\\-0.105670u^{55}-0.0338199u^{54}+\cdots-0.859496u-0.856178\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-0.228248u^{55}-0.101789u^{54}+\cdots-1.32208u-0.0980010\\0.0815574u^{55}+0.220588u^{54}+\cdots-0.171485u-0.0778350\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.00788014u^{55}+0.337184u^{54}+\cdots+0.0774386u+0.935949\\0.0508844u^{55}+0.122185u^{54}+\cdots+0.834455u-0.157223\end{pmatrix}$$

$$a_4 = \begin{pmatrix}0.0740743u^{55}+0.802152u^{54}+\cdots+0.322672u+3.77114\\-0.134670u^{55}-0.112515u^{54}+\cdots-0.799927u-0.831523\end{pmatrix}$$

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

$$a_{12} = \begin{pmatrix}-0.152843u^{55}+0.00107466u^{54}+\cdots+0.363574u+1.27464\\0.288502u^{55}+0.643234u^{54}+\cdots+0.739466u-0.449730\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.103064u^{55}+0.314464u^{54}+\cdots-0.906044u-1.96765\\-0.000335653u^{55}-0.103672u^{54}+\cdots-0.200689u-0.573235\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -2.60373u^{55}+0.0539183u^{54}+\cdots+14.8197u+24.5026$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{56} + 20u^{55} + \cdots + 436u + 1$
c_2, c_4	$u^{56} - 8u^{55} + \cdots + 20u - 1$
c_3, c_6	$u^{56} + 7u^{55} + \cdots - 192u + 128$
c_5, c_9	$u^{56} - 2u^{55} + \cdots + u - 1$
c_7	$u^{56} - 2u^{55} + \cdots + 24u + 36$
c_8, c_{11}, c_{12}	$u^{56} + 2u^{55} + \cdots + 3u + 1$
c_{10}	$u^{56} + 14u^{55} + \cdots + 663u + 99$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{56} + 40y^{55} + \cdots - 177984y + 1$
c_2, c_4	$y^{56} - 20y^{55} + \cdots - 436y + 1$
c_3, c_6	$y^{56} - 45y^{55} + \cdots - 749568y + 16384$
c_5, c_9	$y^{56} + 14y^{55} + \cdots - 5y + 1$
c_7	$y^{56} - 6y^{55} + \cdots + 8424y + 1296$
c_8, c_{11}, c_{12}	$y^{56} + 50y^{55} + \cdots - 5y + 1$
c_{10}	$y^{56} + 2y^{55} + \cdots - 93069y + 9801$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.434045 + 0.764937I$ $a = 0.226290 - 1.290380I$ $b = -0.870790 + 0.961543I$	$-5.25808 + 6.99458I$	$-0.29764 - 8.96864I$
$u = 0.434045 - 0.764937I$ $a = 0.226290 + 1.290380I$ $b = -0.870790 - 0.961543I$	$-5.25808 - 6.99458I$	$-0.29764 + 8.96864I$
$u = 0.607815 + 0.613715I$ $a = 0.265971 - 1.018000I$ $b = -0.230951 + 0.717761I$	$-2.75732 + 1.48664I$	$3.92275 - 4.13753I$
$u = 0.607815 - 0.613715I$ $a = 0.265971 + 1.018000I$ $b = -0.230951 - 0.717761I$	$-2.75732 - 1.48664I$	$3.92275 + 4.13753I$
$u = -0.451362 + 0.714754I$ $a = 0.234053 + 1.284310I$ $b = -0.750580 - 0.842936I$	$-0.27969 - 3.79973I$	$5.42430 + 9.11034I$
$u = -0.451362 - 0.714754I$ $a = 0.234053 - 1.284310I$ $b = -0.750580 + 0.842936I$	$-0.27969 + 3.79973I$	$5.42430 - 9.11034I$
$u = -0.862715 + 0.810503I$ $a = -0.398734 + 0.878095I$ $b = 0.522743 - 1.197170I$	$1.24825 - 8.12321I$	0
$u = -0.862715 - 0.810503I$ $a = -0.398734 - 0.878095I$ $b = 0.522743 + 1.197170I$	$1.24825 + 8.12321I$	0
$u = 0.892853 + 0.801583I$ $a = -0.414906 - 0.801769I$ $b = 0.592527 + 1.126870I$	$6.21297 + 4.29286I$	0
$u = 0.892853 - 0.801583I$ $a = -0.414906 + 0.801769I$ $b = 0.592527 - 1.126870I$	$6.21297 - 4.29286I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.278333+0.741597I$ $a=0.099886+1.151350I$ $b=-1.217460-0.625912I$	$-6.70409+0.23714I$	$-3.85920+2.27316I$
$u=-0.278333-0.741597I$ $a=0.099886-1.151350I$ $b=-1.217460+0.625912I$	$-6.70409-0.23714I$	$-3.85920-2.27316I$
$u=1.056250+0.600176I$ $a=-0.185355-0.398040I$ $b=0.633974+0.569529I$	$-3.26116+0.99617I$	0
$u=1.056250-0.600176I$ $a=-0.185355+0.398040I$ $b=0.633974-0.569529I$	$-3.26116-0.99617I$	0
$u=-0.073699+0.770744I$ $a=-0.052889+0.368979I$ $b=-1.55528-0.19232I$	$-7.63905-3.70925I$	$-4.91263+4.06920I$
$u=-0.073699-0.770744I$ $a=-0.052889-0.368979I$ $b=-1.55528+0.19232I$	$-7.63905+3.70925I$	$-4.91263-4.06920I$
$u=-0.942964+0.786108I$ $a=-0.426418+0.678802I$ $b=0.687117-1.007030I$	$3.85768-0.35095I$	0
$u=-0.942964-0.786108I$ $a=-0.426418-0.678802I$ $b=0.687117+1.007030I$	$3.85768+0.35095I$	0
$u=-0.749144+1.024530I$ $a=0.848834-1.108890I$ $b=0.771803+0.803578I$	$0.55186+2.03907I$	0
$u=-0.749144-1.024530I$ $a=0.848834+1.108890I$ $b=0.771803-0.803578I$	$0.55186-2.03907I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.014910+0.770101I$ $a=-0.429292+0.522295I$ $b=0.792637-0.851387I$	$3.49549-0.01257I$	0
$u=-1.014910-0.770101I$ $a=-0.429292-0.522295I$ $b=0.792637+0.851387I$	$3.49549+0.01257I$	0
$u=0.354062+0.595793I$ $a=0.21013-1.55671I$ $b=-0.850160+0.434176I$	$-1.72486+1.19747I$	$-0.82877-2.04827I$
$u=0.354062-0.595793I$ $a=0.21013+1.55671I$ $b=-0.850160-0.434176I$	$-1.72486-1.19747I$	$-0.82877+2.04827I$
$u=0.784983+1.045670I$ $a=0.735614+1.168520I$ $b=0.864080-0.816507I$	$5.42839+1.98837I$	0
$u=0.784983-1.045670I$ $a=0.735614-1.168520I$ $b=0.864080+0.816507I$	$5.42839-1.98837I$	0
$u=0.085970+0.684763I$ $a=-0.488414-0.527247I$ $b=-1.353840+0.169567I$	$-2.62828+1.16505I$	$0.23653-4.88495I$
$u=0.085970-0.684763I$ $a=-0.488414+0.527247I$ $b=-1.353840-0.169567I$	$-2.62828-1.16505I$	$0.23653+4.88495I$
$u=1.064270+0.803296I$ $a=-0.499399-0.427068I$ $b=0.922982+0.802570I$	$5.24801-4.07030I$	0
$u=1.064270-0.803296I$ $a=-0.499399+0.427068I$ $b=0.922982-0.802570I$	$5.24801+4.07030I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.413382 + 0.518807I$ $a = 1.54616 - 0.28428I$ $b = -0.174530 - 0.207759I$	$-2.93194 + 2.06182I$	$3.92769 - 4.29642I$
$u = 0.413382 - 0.518807I$ $a = 1.54616 + 0.28428I$ $b = -0.174530 + 0.207759I$	$-2.93194 - 2.06182I$	$3.92769 + 4.29642I$
$u = -0.824055 + 1.071620I$ $a = 0.590241 - 1.211660I$ $b = 0.975048 + 0.809784I$	$2.94925 - 6.19699I$	0
$u = -0.824055 - 1.071620I$ $a = 0.590241 + 1.211660I$ $b = 0.975048 - 0.809784I$	$2.94925 + 6.19699I$	0
$u = -0.468063 + 0.427077I$ $a = 2.06154 + 1.32565I$ $b = -0.599437 + 0.131295I$	$0.420464 + 0.590909I$	$7.13336 + 0.51074I$
$u = -0.468063 - 0.427077I$ $a = 2.06154 - 1.32565I$ $b = -0.599437 - 0.131295I$	$0.420464 - 0.590909I$	$7.13336 - 0.51074I$
$u = 0.509445 + 0.375315I$ $a = 2.90388 - 1.33826I$ $b = -0.746189 - 0.253774I$	$-4.18225 - 3.70043I$	$1.67113 - 1.36683I$
$u = 0.509445 - 0.375315I$ $a = 2.90388 + 1.33826I$ $b = -0.746189 + 0.253774I$	$-4.18225 + 3.70043I$	$1.67113 + 1.36683I$
$u = -1.096180 + 0.817244I$ $a = -0.518579 + 0.361029I$ $b = 0.983579 - 0.750622I$	$-0.10153 + 7.89751I$	0
$u = -1.096180 - 0.817244I$ $a = -0.518579 - 0.361029I$ $b = 0.983579 + 0.750622I$	$-0.10153 - 7.89751I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.873027 + 1.098490I$ $a = 0.401362 - 1.247710I$ $b = 1.115410 + 0.785925I$	$2.46724 - 6.89451I$	0
$u = -0.873027 - 1.098490I$ $a = 0.401362 + 1.247710I$ $b = 1.115410 - 0.785925I$	$2.46724 + 6.89451I$	0
$u = 0.90047 + 1.09827I$ $a = 0.313656 + 1.301590I$ $b = 1.19115 - 0.80027I$	$4.29861 + 11.19740I$	0
$u = 0.90047 - 1.09827I$ $a = 0.313656 - 1.301590I$ $b = 1.19115 + 0.80027I$	$4.29861 - 11.19740I$	0
$u = -0.10217 + 1.42460I$ $a = 0.637507 - 0.076993I$ $b = 0.711327 + 0.052901I$	$-4.30900 - 2.14834I$	0
$u = -0.10217 - 1.42460I$ $a = 0.637507 + 0.076993I$ $b = 0.711327 - 0.052901I$	$-4.30900 + 2.14834I$	0
$u = -0.91547 + 1.10371I$ $a = 0.250236 - 1.309310I$ $b = 1.23792 + 0.78854I$	$-1.0410 - 15.1593I$	0
$u = -0.91547 - 1.10371I$ $a = 0.250236 + 1.309310I$ $b = 1.23792 - 0.78854I$	$-1.0410 + 15.1593I$	0
$u = 0.85543 + 1.15949I$ $a = 0.352837 + 1.051270I$ $b = 1.096290 - 0.637339I$	$-4.89061 + 5.92736I$	0
$u = 0.85543 - 1.15949I$ $a = 0.352837 - 1.051270I$ $b = 1.096290 + 0.637339I$	$-4.89061 - 5.92736I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.481256$ $a=\ 0.741225$ $b=\ 0.0486633$	0.741508	13.5170
$u=-0.453091+0.130268I$ $a=\ 6.23400+2.08890I$ $b=-1.045430+0.085047I$	$-4.97667-2.52844I$	$15.0645+21.3531I$
$u=-0.453091-0.130268I$ $a=\ 6.23400-2.08890I$ $b=-1.045430-0.085047I$	$-4.97667+2.52844I$	$15.0645-21.3531I$
$u=\ 0.20928+1.56362I$ $a=\ 0.526789+0.134917I$ $b=\ 0.787380-0.084461I$	$-10.62760+5.32282I$	0
$u=\ 0.20928-1.56362I$ $a=\ 0.526789-0.134917I$ $b=\ 0.787380+0.084461I$	$-10.62760-5.32282I$	0
$u=\ 0.355132$ $a=\ 10.2088$ $b=-1.03133$	-0.754394	76.5300

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

(i) Arc colorings

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

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

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

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

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

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

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

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

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

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

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^2+u-14$

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y-1)^3$
c_3, c_6	y^3
c_5, c_8, c_9 c_{10}, c_{11}, c_{12}	$y^3 + 4y^2 + 4y - 1$
c_7	$y^3 + y^2 + 13y - 4$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.22670 + 1.46771I$ $a = -0.432268 - 0.136798I$ $b = -1.00000$	$-11.08570 + 5.13794I$	$-7.46495 - 0.52866I$
$u = 0.22670 - 1.46771I$ $a = -0.432268 + 0.136798I$ $b = -1.00000$	$-11.08570 - 5.13794I$	$-7.46495 + 0.52866I$
$u = -0.453398$ $a = 4.86454$ $b = -1.00000$	-0.857735	-15.0700

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

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

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.621744 + 0.440597I$ $a = 0.57070 - 1.62477I$ $b = -1.00000$	$-4.93480 + 2.02988I$	$2.57732 - 1.82047I$
$u = 0.621744 - 0.440597I$ $a = 0.57070 + 1.62477I$ $b = -1.00000$	$-4.93480 - 2.02988I$	$2.57732 + 1.82047I$
$u = -0.121744 + 1.306620I$ $a = -0.570696 + 0.107280I$ $b = -1.00000$	$-4.93480 - 2.02988I$	$-3.07732 + 2.50966I$
$u = -0.121744 - 1.306620I$ $a = -0.570696 - 0.107280I$ $b = -1.00000$	$-4.93480 + 2.02988I$	$-3.07732 - 2.50966I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^7)(u^{56}+20u^{55}+\cdots+436u+1)$
c_2	$((u-1)^7)(u^{56}-8u^{55}+\cdots+20u-1)$
c_3, c_6	$u^7(u^{56}+7u^{55}+\cdots-192u+128)$
c_4	$((u+1)^7)(u^{56}-8u^{55}+\cdots+20u-1)$
c_5	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{56}-2u^{55}+\cdots+u-1)$
c_7	$((u^2-u+1)^2)(u^3+3u^2+5u+2)(u^{56}-2u^{55}+\cdots+24u+36)$
c_8	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{56}+2u^{55}+\cdots+3u+1)$
c_9	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{56}-2u^{55}+\cdots+u-1)$
c_{10}	$(u^3+2u+1)(u^4-u^3+2u^2-2u+1)(u^{56}+14u^{55}+\cdots+663u+99)$
c_{11}, c_{12}	$(u^3+2u-1)(u^4+u^3+2u^2+2u+1)(u^{56}+2u^{55}+\cdots+3u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y-1)^7)(y^{56}+40y^{55}+\cdots-177984y+1)$
c_2, c_4	$((y-1)^7)(y^{56}-20y^{55}+\cdots-436y+1)$
c_3, c_6	$y^7(y^{56}-45y^{55}+\cdots-749568y+16384)$
c_5, c_9	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)(y^{56}+14y^{55}+\cdots-5y+1)$
c_7	$((y^2+y+1)^2)(y^3+y^2+13y-4)(y^{56}-6y^{55}+\cdots+8424y+1296)$
c_8, c_{11}, c_{12}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)(y^{56}+50y^{55}+\cdots-5y+1)$
c_{10}	$(y^3+4y^2+4y-1)(y^4+3y^3+2y^2+1)$ $\cdot(y^{56}+2y^{55}+\cdots-93069y+9801)$