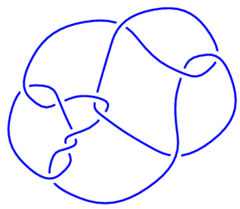
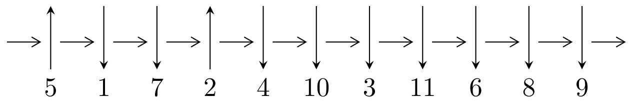
$11a_{49}$ ($K11a_{49}$)



[1]

Arc Sequences



Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{3} I_i^u$$

$$I_1^u = \langle a^4 - 3a^3 + 5a^2 - 6a + 4,\ -a^3 + a^2 - a + 2u + 2,\ -a^3 + 3a^2 + 2b - 3a + 2\rangle$$
$$I_2^u = \langle u^4 - u^3 + u^2 + 1,\ b + 1,\ u^3 - u^2 + a + u\rangle$$
$$I_3^u = \langle u^{60} - 4u^{59} + \cdots - 6u + 1,\ 2.82387 \times 10^{17}u^{59} - 1.26103 \times 10^{18}u^{58} + \cdots + 8.05298 \times 10^{17}b - 3.80595 \times 10^{16}$$
$$- 1.38918 \times 10^{18}u^{59} + 5.27349 \times 10^{18}u^{58} + \cdots + 8.05298 \times 10^{17}a - 1.11954 \times 10^{18}\rangle$$

There are 3 irreducible components with 68 representations.

[1]The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I.

$\boldsymbol{I_1^u = \langle a^4 - 3a^3 + 5a^2 - 6a + 4,\ -a^3 + a^2 - a + 2u + 2,\ -a^3 + 3a^2 + 2b - 3a + 2\rangle}$

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =**unknown**

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.500000 + 0.866025I$ $a = \quad 0.19098 - 1.40126I$ $b = \quad 1.61803$	$-8.88264 - 2.02988I$	$-15.5000 - 2.3454I$
$u = -0.500000 - 0.866025I$ $a = \quad 0.19098 + 1.40126I$ $b = \quad 1.61803$	$-8.88264 + 2.02988I$	$-15.5000 + 2.3454I$
$u = -0.500000 - 0.866025I$ $a = \quad 1.30902 - 0.53523I$ $b = -0.618034$	$-0.98696 + 2.02988I$	$-15.5000 - 9.2736I$
$u = -0.500000 + 0.866025I$ $a = \quad 1.30902 + 0.53523I$ $b = -0.618034$	$-0.98696 - 2.02988I$	$-15.5000 + 9.2736I$

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

(i) Arc colorings

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.351808 - 0.720342I$ $a = -0.547424 + 1.120873I$ $b = -1.00000$	$-1.85594 + 1.41510I$	$-15.1414 - 7.6022I$
$u = -0.351808 + 0.720342I$ $a = -0.547424 - 1.120873I$ $b = -1.00000$	$-1.85594 - 1.41510I$	$-15.1414 + 7.6022I$
$u = 0.851808 - 0.911292I$ $a = 0.547424 + 0.585652I$ $b = -1.00000$	$5.14581 - 3.16396I$	$-0.358581 + 1.047693I$
$u = 0.851808 + 0.911292I$ $a = 0.547424 - 0.585652I$ $b = -1.00000$	$5.14581 + 3.16396I$	$-0.358581 - 1.047693I$

III. I_3^u =
$\langle u^{60}-4u^{59}+\cdots-6u+1,\ 2.82\times10^{17}u^{59}-1.26\times10^{18}u^{58}+\cdots+8.05\times10^{17}b-3.81\times10^{16},\ -1.39\times10^{18}u^{59}+5.27\times10^{18}u^{58}+\cdots+8.05\times10^{17}a-1.12\times10^{18}\rangle$

(i) Arc colorings

$$a_1 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_2 = \begin{pmatrix}1\\-u^2\end{pmatrix}$$
$$a_3 = \begin{pmatrix}u^2+1\\-u^2\end{pmatrix}$$
$$a_4 = \begin{pmatrix}-u\\u^3+u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-u^3\\u^5+u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}1.72505u^{59}-6.54850u^{58}+\cdots+26.8373u+1.39022\\-0.350661u^{59}+1.56592u^{58}+\cdots-2.55053u+0.0472614\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}3.45045u^{59}-11.8719u^{58}+\cdots+24.7014u-0.108151\\-2.09736u^{59}+8.23633u^{58}+\cdots-11.2979u+1.81095\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-2.69854u^{59}+9.78721u^{58}+\cdots-2.72116u+4.45599\\1.00661u^{59}-4.15918u^{58}+\cdots+6.00527u-1.47261\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1.69377u^{59}-5.26308u^{58}+\cdots+15.2624u+0.956700\\-1.51199u^{59}+6.56263u^{58}+\cdots-11.1193u+1.69377\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.152462u^{59}+0.553640u^{58}+\cdots+17.1437u+2.97986\\-0.110576u^{59}+0.554686u^{58}+\cdots-0.308427u-0.243818\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.152462u^{59}+0.553640u^{58}+\cdots+17.1437u+2.97986\\-0.110576u^{59}+0.554686u^{58}+\cdots-0.308427u-0.243818\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.846021 - 0.263574I$ $a = -0.730426 + 0.642423I$ $b = 1.372607 - 0.240045I$	$-3.38098 + 5.24726I$	$-7.94356 - 5.01660I$
$u = -0.846021 + 0.263574I$ $a = -0.730426 - 0.642423I$ $b = 1.372607 + 0.240045I$	$-3.38098 - 5.24726I$	$-7.94356 + 5.01660I$
$u = -0.834410 - 0.714804I$ $a = -1.294419 - 0.462921I$ $b = 1.370482 + 0.211215I$	$-3.80109 - 2.07837I$	$-9.80025 + 1.22105I$
$u = -0.834410 + 0.714804I$ $a = -1.294419 + 0.462921I$ $b = 1.370482 - 0.211215I$	$-3.80109 + 2.07837I$	$-9.80025 - 1.22105I$
$u = -0.738082 - 1.010081I$ $a = -0.43546 + 2.16500I$ $b = 1.40212 - 0.25943I$	$-4.71228 + 7.96352I$	$-10.63500 - 5.90852I$
$u = -0.738082 + 1.010081I$ $a = -0.43546 - 2.16500I$ $b = 1.40212 + 0.25943I$	$-4.71228 - 7.96352I$	$-10.63500 + 5.90852I$
$u = -0.692724 - 0.774214I$ $a = 0.83410 + 1.45179I$ $b = -0.153691 - 0.545787I$	$1.086085 + 0.692045I$	$-4.81030 + 0.29508I$
$u = -0.692724 + 0.774214I$ $a = 0.83410 - 1.45179I$ $b = -0.153691 + 0.545787I$	$1.086085 - 0.692045I$	$-4.81030 - 0.29508I$
$u = -0.680719 - 0.940890I$ $a = -0.31149 - 1.70748I$ $b = -0.250540 + 0.658416I$	$0.56981 + 4.60985I$	$-6.69053 - 5.91571I$
$u = -0.680719 + 0.940890I$ $a = -0.31149 + 1.70748I$ $b = -0.250540 - 0.658416I$	$0.56981 - 4.60985I$	$-6.69053 + 5.91571I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.649242 - 0.172450I$ $a = 0.505415 - 0.972953I$ $b = -0.166593 + 0.624695I$	$1.53389 + 2.11161I$	$-1.83843 - 4.55656I$
$u = -0.649242 + 0.172450I$ $a = 0.505415 + 0.972953I$ $b = -0.166593 - 0.624695I$	$1.53389 - 2.11161I$	$-1.83843 + 4.55656I$
$u = -0.608501 - 0.942456I$ $a = -0.57515 - 2.85515I$ $b = -1.216357 + 0.116183I$	$-1.99576 + 3.02877I$	$-9.18914 - 0.37480I$
$u = -0.608501 + 0.942456I$ $a = -0.57515 + 2.85515I$ $b = -1.216357 - 0.116183I$	$-1.99576 - 3.02877I$	$-9.18914 + 0.37480I$
$u = -0.550539 - 0.791247I$ $a = 1.05956 + 2.01758I$ $b = -1.050236 - 0.110830I$	$-1.44417 + 1.61127I$	$-11.6485 - 15.8847I$
$u = -0.550539 + 0.791247I$ $a = 1.05956 - 2.01758I$ $b = -1.050236 + 0.110830I$	$-1.44417 - 1.61127I$	$-11.6485 + 15.8847I$
$u = -0.508484 - 1.131971I$ $a = 0.356209 + 0.908446I$ $b = 1.401417 + 0.163779I$	$-6.11056 - 0.33405I$	$-11.54717 + 0.63818I$
$u = -0.508484 + 1.131971I$ $a = 0.356209 - 0.908446I$ $b = 1.401417 - 0.163779I$	$-6.11056 + 0.33405I$	$-11.54717 - 0.63818I$
$u = -0.474455 - 0.963893I$ $a = 1.013159 - 0.103342I$ $b = -0.320933 - 0.297553I$	$-0.66653 + 1.65828I$	$-3.28323 + 3.22527I$
$u = -0.474455 + 0.963893I$ $a = 1.013159 + 0.103342I$ $b = -0.320933 + 0.297553I$	$-0.66653 - 1.65828I$	$-3.28323 - 3.22527I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.399913-0.190398I$ $a=-1.205214-0.371567I$ $b=-1.119037+0.184637I$	$-1.23369+0.89939I$	$-5.06416+0.58389I$
$u=-0.399913+0.190398I$ $a=-1.205214+0.371567I$ $b=-1.119037-0.184637I$	$-1.23369-0.89939I$	$-5.06416-0.58389I$
$u=-0.311462-0.787706I$ $a=\ \ 0.856946-0.064626I$ $b=\ \ 0.1037943-0.0707771I$	$-0.33181+1.48905I$	$-3.19515-4.46795I$
$u=-0.311462+0.787706I$ $a=\ \ 0.856946+0.064626I$ $b=\ \ 0.1037943+0.0707771I$	$-0.33181-1.48905I$	$-3.19515+4.46795I$
$u=-0.153304-1.063440I$ $a=-0.317563-0.201072I$ $b=-0.387799+0.734072I$	$-2.46678+4.55995I$	$-10.63324-6.84099I$
$u=-0.153304+1.063440I$ $a=-0.317563+0.201072I$ $b=-0.387799-0.734072I$	$-2.46678-4.55995I$	$-10.63324+6.84099I$
$u=-0.147390-1.174605I$ $a=\ \ 1.30719+0.74994I$ $b=\ \ 1.45691-0.27854I$	$-8.38340+8.24100I$	$-13.2725-6.1295I$
$u=-0.147390+1.174605I$ $a=\ \ 1.30719-0.74994I$ $b=\ \ 1.45691+0.27854I$	$-8.38340-8.24100I$	$-13.2725+6.1295I$
$u=-0.089235-1.015874I$ $a=-2.45653-0.04547I$ $b=-1.360304+0.086702I$	$-4.90942+2.39733I$	$-12.95918-3.22106I$
$u=-0.089235+1.015874I$ $a=-2.45653+0.04547I$ $b=-1.360304-0.086702I$	$-4.90942-2.39733I$	$-12.95918+3.22106I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.030561-0.936305I$ $a=-0.789457+0.651261I$ $b=-0.636405-0.600822I$	$-3.26453+0.03248I$	$-13.91224+0.15923I$
$u=-0.030561+0.936305I$ $a=-0.789457-0.651261I$ $b=-0.636405+0.600822I$	$-3.26453-0.03248I$	$-13.91224-0.15923I$
$u=\ 0.109251$ $a=\ 5.52438$ $b=-0.489956$	-0.859418	-11.8178
$u=\ 0.171612-1.008352I$ $a=\ 1.22301-1.35653I$ $b=\ 1.53424+0.14331I$	$-10.47485-2.55878I$	$-16.6852+0.9369I$
$u=\ 0.171612+1.008352I$ $a=\ 1.22301+1.35653I$ $b=\ 1.53424-0.14331I$	$-10.47485+2.55878I$	$-16.6852-0.9369I$
$u=\ 0.598878-0.877781I$ $a=\ 0.062044-1.267175I$ $b=\ 1.68096-0.03245I$	$-8.49817-2.35434I$	$-3.03721+7.33944I$
$u=\ 0.598878+0.877781I$ $a=\ 0.062044+1.267175I$ $b=\ 1.68096+0.03245I$	$-8.49817+2.35434I$	$-3.03721-7.33944I$
$u=\ 0.615422$ $a=-1.72722$ $b=\ 1.45673$	-7.21613	-11.9743
$u=\ 0.704927-0.962970I$ $a=\ 0.864289-0.177634I$ $b=-0.960690+0.700258I$	$1.22350-4.74489I$	$-7.08737+4.52380I$
$u=\ 0.704927+0.962970I$ $a=\ 0.864289+0.177634I$ $b=-0.960690-0.700258I$	$1.22350+4.74489I$	$-7.08737-4.52380I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.706871 - 0.997331I$ $a = -0.55158 + 1.99008I$ $b = -1.46184 - 0.24029I$	$0.04969 - 7.86068I$	$-7.49688 + 6.26874I$
$u = 0.706871 + 0.997331I$ $a = -0.55158 - 1.99008I$ $b = -1.46184 + 0.24029I$	$0.04969 + 7.86068I$	$-7.49688 - 6.26874I$
$u = 0.727256 - 1.019210I$ $a = -0.76545 + 1.39316I$ $b = -0.318501 - 0.946527I$	$3.14485 - 10.38846I$	$-5.72246 + 8.19302I$
$u = 0.727256 + 1.019210I$ $a = -0.76545 - 1.39316I$ $b = -0.318501 + 0.946527I$	$3.14485 + 10.38846I$	$-5.72246 - 8.19302I$
$u = 0.730510 - 1.064478I$ $a = 0.19549 - 2.18323I$ $b = 1.46811 + 0.38180I$	$-2.5536 - 15.1714I$	$-9.11132 + 8.93146I$
$u = 0.730510 + 1.064478I$ $a = 0.19549 + 2.18323I$ $b = 1.46811 - 0.38180I$	$-2.5536 + 15.1714I$	$-9.11132 - 8.93146I$
$u = 0.746749 - 0.750172I$ $a = 0.21661 + 1.66501I$ $b = -1.022216 - 0.626579I$	$1.87463 - 0.78688I$	$-5.48587 + 0.89304I$
$u = 0.746749 + 0.750172I$ $a = 0.21661 - 1.66501I$ $b = -1.022216 + 0.626579I$	$1.87463 + 0.78688I$	$-5.48587 - 0.89304I$
$u = 0.773804 - 0.697114I$ $a = 0.269799 - 0.363113I$ $b = -1.40946 + 0.27587I$	$0.95728 + 2.24717I$	$-5.61761 - 1.12563I$
$u = 0.773804 + 0.697114I$ $a = 0.269799 + 0.363113I$ $b = -1.40946 - 0.27587I$	$0.95728 - 2.24717I$	$-5.61761 + 1.12563I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.775127 - 0.938595I$ $a = 0.582419 - 1.068642I$ $b = 0.397265 + 0.581288I$	$6.05175 - 4.76483I$	$-1.11123 + 4.56468I$
$u = 0.775127 + 0.938595I$ $a = 0.582419 + 1.068642I$ $b = 0.397265 - 0.581288I$	$6.05175 + 4.76483I$	$-1.11123 - 4.56468I$
$u = 0.810322 - 0.816113I$ $a = -0.161021 + 0.807105I$ $b = 0.307636 - 0.644850I$	$6.42634 - 1.17254I$	$-0.566200 + 1.294911I$
$u = 0.810322 + 0.816113I$ $a = -0.161021 - 0.807105I$ $b = 0.307636 + 0.644850I$	$6.42634 + 1.17254I$	$-0.566200 - 1.294911I$
$u = 0.826891 - 0.686761I$ $a = 0.46435 - 1.34579I$ $b = -0.260347 + 0.914658I$	$4.15844 + 4.56410I$	$-3.69697 - 3.37945I$
$u = 0.826891 + 0.686761I$ $a = 0.46435 + 1.34579I$ $b = -0.260347 - 0.914658I$	$4.15844 - 4.56410I$	$-3.69697 + 3.37945I$
$u = 0.886564 - 0.634360I$ $a = -0.830791 + 0.709189I$ $b = 1.43351 - 0.37170I$	$-1.23187 + 9.17979I$	$-7.33609 - 4.63134I$
$u = 0.886564 + 0.634360I$ $a = -0.830791 - 0.709189I$ $b = 1.43351 + 0.37170I$	$-1.23187 - 9.17979I$	$-7.33609 + 4.63134I$
$u = 0.893193 - 0.920215I$ $a = -0.784615 - 0.685257I$ $b = 1.182512 + 0.025488I$	$4.58752 - 3.28588I$	$-14.2270 + 3.8304I$
$u = 0.893193 + 0.920215I$ $a = -0.784615 + 0.685257I$ $b = 1.182512 - 0.025488I$	$4.58752 + 3.28588I$	$-14.2270 - 3.8304I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^2+u+1)^2(u^4-u^3+u^2+1)(u^{60}+4u^{59}+\cdots+6u+1)$
c_2, c_5	$(u^2+u+1)^2(u^4+u^3+\cdots+2u+1)(u^{60}+20u^{59}+\cdots-82u+1)$
c_3	$u^4(u^4-u^3+\cdots-2u+1)(u^{60}+2u^{59}+\cdots+16u+16)$
c_4	$(u^2-u+1)^2(u^4+u^3+u^2+1)(u^{60}+4u^{59}+\cdots+6u+1)$
c_6	$u^4(u^2+u-1)^2(u^{60}+3u^{59}+\cdots-24u-16)$
c_7	$u^4(u^4+u^3+\cdots+2u+1)(u^{60}+2u^{59}+\cdots+16u+16)$
c_8	$(u-1)^4(u^2+u-1)^2(u^{60}+7u^{59}+\cdots-6u-1)$
c_9	$u^4(u^2-u-1)^2(u^{60}+3u^{59}+\cdots-24u-16)$
c_{10}, c_{11}	$(u+1)^4(u^2-u-1)^2(u^{60}+7u^{59}+\cdots-6u-1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_4	$(y^2+y+1)^2(y^4+y^3+\cdots+2y+1)(y^{60}+20y^{59}+\cdots-82y+1)$
c_2, c_5	$(y^2+y+1)^2(y^4+5y^3+\cdots+2y+1)(y^{60}+44y^{59}+\cdots-7010y+1)$
c_3, c_7	$y^4(y^4+5y^3+\cdots+2y+1)(y^{60}+30y^{59}+\cdots+1408y+256)$
c_6, c_9	$y^4(y^2-3y+1)^2(y^{60}-33y^{59}+\cdots-576y+256)$
c_8	$1.0000000000000(1y-1.0000000000000)^4$ $(1y^2-3.0000000000000y+1.0000000000000)^2$ $(1.00y^{60}-57.0y^{59}+\cdots-48.0y+1.00)$
c_{10}	$1.0000000000000(1y-1.00000000000000)^4$ $(1y^2-3.0000000000000y+1.00000000000000)^2$ $(1.00y^{60}-57.0y^{59}+\cdots-48.0y+1.00)$
c_{11}	$1.0000000000000(1y-1.0000000000000)^4$ $(1y^2-3.0000000000000y+1.0000000000000)^2$ $(1.00y^{60}-57.0y^{59}+\cdots-48.0y+1.00)$