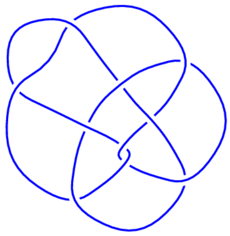
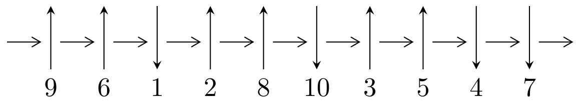
10_{119} ($K10a_{85}$)



[1]

Arc Sequences



Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{2} I_i^u$$

$$\begin{aligned}
I_1^u = \langle & u^{10} + 5u^9 + 14u^8 + 24u^7 + 29u^6 + 24u^5 + 11u^4 - u^3 - 2u^2 + u + 1, \\
& -41u^9 - 152u^8 - 353u^7 - 428u^6 - 371u^5 - 73u^4 + 248u^3 + 361u^2 + 67a + 135u + 77, \\
& 63u^9 + 245u^8 + 580u^7 + 741u^6 + 691u^5 + 305u^4 - 100u^3 - 272u^2 + 67b + 72u + 50\rangle \\
I_2^u = \langle & u^{60} + 4u^{58} + \cdots - 28u + 3, \\
& -2.92641 \times 10^{187}u^{59} - 8.35049 \times 10^{186}u^{58} + \cdots + 6.28202 \times 10^{187}b + 1.91667 \times 10^{188}, \\
& 5.56717 \times 10^{187}u^{59} + 1.54419 \times 10^{187}u^{58} + \cdots + 1.88461 \times 10^{188}a - 5.98410 \times 10^{188}\rangle
\end{aligned}$$

There are 2 irreducible components with 70 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. $\boldsymbol{I_1^u = \langle u^{10} + 5u^9 + \cdots + u + 1,\ -41u^9 - 152u^8 + \cdots + 67a + 77,\ 63u^9 + 245u^8 + \cdots + 67b + 50\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.611940u^9 + 2.26866u^8 + \cdots - 2.01493u - 1.14925 \\ -0.940299u^9 - 3.65672u^8 + \cdots - 1.07463u - 0.746269 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1.59701u^9 + 6.43284u^8 + \cdots + 2.25373u + 3.53731 \\ -2.59701u^9 - 11.4328u^8 + \cdots - 0.253731u - 3.53731 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.671642u^9 + 2.61194u^8 + \cdots - 2.08955u - 0.895522 \\ -u^9 - 4u^8 - 10u^7 - 14u^6 - 15u^5 - 9u^4 - 2u^3 + 3u^2 - u - 1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.0447761u^9 - 0.492537u^8 + \cdots + 3.19403u + 1.94030 \\ -1.04478u^9 - 4.50746u^8 + \cdots - 0.194030u - 0.940299 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.611940u^9 + 2.26866u^8 + \cdots - 2.01493u - 1.14925 \\ -0.283582u^9 - 0.880597u^8 + \cdots - 0.895522u + 0.0447761 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 1.59701u^9 + 7.43284u^8 + \cdots + 1.25373u + 0.537313 \\ -0.716418u^9 - 3.11940u^8 + \cdots + 0.895522u - 1.04478 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.910448u^9 + 3.98507u^8 + \cdots - 1.38806u - 1.88060 \\ -0.164179u^9 - 0.194030u^8 + \cdots - 1.04478u + 0.552239 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes
$= 14u^9 + 61u^8 + 157u^7 + 236u^6 + 256u^5 + 174u^4 + 45u^3 - 37u^2 + 3u + 19$

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.14707 - 1.48128I$ $a = -0.609691 - 0.292888I$ $b = 0.702457 + 0.789416I$	$-2.50173 + 4.70796I$	$-2.30544 - 6.58589I$
$u = -1.14707 + 1.48128I$ $a = -0.609691 + 0.292888I$ $b = 0.702457 - 0.789416I$	$-2.50173 - 4.70796I$	$-2.30544 + 6.58589I$
$u = -1.006319 - 0.639149I$ $a = -0.141697 + 0.417011I$ $b = 0.305504 + 0.686816I$	$0.60938 + 1.82644I$	$5.24506 - 2.77183I$
$u = -1.006319 + 0.639149I$ $a = -0.141697 - 0.417011I$ $b = 0.305504 - 0.686816I$	$0.60938 - 1.82644I$	$5.24506 + 2.77183I$
$u = -0.666955 - 0.329661I$ $a = -1.074642 - 0.447632I$ $b = 0.93198 + 1.28311I$	$0.80863 + 2.83685I$	$3.98230 - 13.24479I$
$u = -0.666955 + 0.329661I$ $a = -1.074642 + 0.447632I$ $b = 0.93198 - 1.28311I$	$0.80863 - 2.83685I$	$3.98230 + 13.24479I$
$u = -0.069226 - 1.285133I$ $a = 0.881151 - 0.152583I$ $b = -1.100169 - 0.460898I$	$-5.27004 + 6.36836I$	$-3.95341 - 6.63467I$
$u = -0.069226 + 1.285133I$ $a = 0.881151 + 0.152583I$ $b = -1.100169 + 0.460898I$	$-5.27004 - 6.36836I$	$-3.95341 + 6.63467I$
$u = 0.389573 - 0.258635I$ $a = -2.55512 + 1.96682I$ $b = -0.339768 - 0.572266I$	$-5.16077 + 2.93340I$	$2.03148 - 3.30765I$
$u = 0.389573 + 0.258635I$ $a = -2.55512 - 1.96682I$ $b = -0.339768 + 0.572266I$	$-5.16077 - 2.93340I$	$2.03148 + 3.30765I$

II. $\boldsymbol{I_2^u = \langle u^{60} + 4u^{58} + \cdots - 28u + 3,\ -2.93 \times 10^{187} u^{59} - 8.35 \times 10^{186} u^{58} + \cdots + 6.28 \times 10^{187} b + 1.92 \times 10^{188},\ 5.57 \times 10^{187} u^{59} + 1.54 \times 10^{187} u^{58} + \cdots + 1.88 \times 10^{188} a - 5.98 \times 10^{188} \rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.295402u^{59} - 0.0819373u^{58} + \cdots - 2.29883u + 3.17525 \\ 0.465839u^{59} + 0.132927u^{58} + \cdots + 20.7915u - 3.05104 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.132338u^{59} - 0.117631u^{58} + \cdots + 10.6408u - 3.11418 \\ -0.0127953u^{59} + 0.260649u^{58} + \cdots - 30.8475u + 5.43814 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.331765u^{59} - 0.0994100u^{58} + \cdots - 3.21522u + 3.32822 \\ 0.502201u^{59} + 0.150400u^{58} + \cdots + 21.7079u - 3.20400 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1.61798u^{59} + 0.226769u^{58} + \cdots + 73.0966u - 7.40978 \\ -0.727922u^{59} + 0.0979081u^{58} + \cdots - 61.9678u + 7.58270 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.295402u^{59} - 0.0819373u^{58} + \cdots - 2.29883u + 3.17525 \\ 0.512381u^{59} + 0.179225u^{58} + \cdots + 19.3834u - 2.80522 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.151223u^{59} + 0.103858u^{58} + \cdots + 15.9126u - 2.83148 \\ -0.0824824u^{59} - 0.118027u^{58} + \cdots + 3.04563u - 0.708587 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.830298u^{59} + 0.205190u^{58} + \cdots - 72.6925u + 8.44583 \\ -0.103653u^{59} - 0.237454u^{58} + \cdots + 20.3707u - 3.23913 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.43659u^{59} + 0.426058u^{58} + \cdots - 246.489u + 36.8057$

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.238385 - 0.475118I$ $a = \quad 0.325818 + 0.733060I$ $b = -0.41049 - 1.55431I$	$-1.53778 + 2.56920I$	$1.40739 - 3.97397I$
$u = -1.238385 + 0.475118I$ $a = \quad 0.325818 - 0.733060I$ $b = -0.41049 + 1.55431I$	$-1.53778 - 2.56920I$	$1.40739 + 3.97397I$
$u = -1.16552 - 1.29014I$ $a = \quad 0.557684 + 0.308461I$ $b = -0.693224 - 1.050902I$	$-1.42019 + 3.81670I$	$2.39392 - 1.19874I$
$u = -1.16552 + 1.29014I$ $a = \quad 0.557684 - 0.308461I$ $b = -0.693224 + 1.050902I$	$-1.42019 - 3.81670I$	$2.39392 + 1.19874I$
$u = -1.01214 - 1.22490I$ $a = -0.750680 - 0.364385I$ $b = \quad 0.695461 + 0.539687I$	$-2.23892 + 3.83057I$	$1.35038 + 0.97651I$
$u = -1.01214 + 1.22490I$ $a = -0.750680 + 0.364385I$ $b = \quad 0.695461 - 0.539687I$	$-2.23892 - 3.83057I$	$1.35038 - 0.97651I$
$u = -0.990107 - 0.775650I$ $a = \quad 0.363869 - 0.232534I$ $b = -0.689474 - 0.479498I$	$1.01358 + 3.09322I$	$5.20661 - 7.95930I$
$u = -0.990107 + 0.775650I$ $a = \quad 0.363869 + 0.232534I$ $b = -0.689474 + 0.479498I$	$1.01358 - 3.09322I$	$5.20661 + 7.95930I$
$u = -0.98126 - 1.54901I$ $a = -0.629038 - 0.124952I$ $b = \quad 0.628595 + 0.975527I$	$-2.67312 + 6.89147I$	$-0.54802 - 9.35333I$
$u = -0.98126 + 1.54901I$ $a = -0.629038 + 0.124952I$ $b = \quad 0.628595 - 0.975527I$	$-2.67312 - 6.89147I$	$-0.54802 + 9.35333I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.97062-1.39698I$ $a=\ \ 0.709468+0.305181I$ $b=-1.068754-0.684485I$	$-3.13949+6.16052I$	$-0.86534-8.28596I$
$u=-0.97062+1.39698I$ $a=\ \ 0.709468-0.305181I$ $b=-1.068754+0.684485I$	$-3.13949-6.16052I$	$-0.86534+8.28596I$
$u=-0.950374-0.230216I$ $a=-0.689315+0.180915I$ $b=\ \ 0.513079+0.172371I$	$1.77833+0.12398I$	$7.12326+1.43443I$
$u=-0.950374+0.230216I$ $a=-0.689315-0.180915I$ $b=\ \ 0.513079-0.172371I$	$1.77833-0.12398I$	$7.12326-1.43443I$
$u=-0.880526-0.425648I$ $a=\ \ 0.273162-0.703429I$ $b=-0.560842-0.757300I$	$0.285692+0.756946I$	$1.15945+1.79896I$
$u=-0.880526+0.425648I$ $a=\ \ 0.273162+0.703429I$ $b=-0.560842+0.757300I$	$0.285692-0.756946I$	$1.15945-1.79896I$
$u=-0.796474-0.786684I$ $a=-0.258331+0.743451I$ $b=\ \ 0.326012+0.849608I$	$-0.44456+2.32036I$	$-1.97518-4.64341I$
$u=-0.796474+0.786684I$ $a=-0.258331-0.743451I$ $b=\ \ 0.326012-0.849608I$	$-0.44456-2.32036I$	$-1.97518+4.64341I$
$u=-0.621503-0.751780I$ $a=-1.44905-0.67817I$ $b=\ \ 0.163932+0.584162I$	$-3.26872+3.24397I$	$-0.45716-6.47664I$
$u=-0.621503+0.751780I$ $a=-1.44905+0.67817I$ $b=\ \ 0.163932-0.584162I$	$-3.26872-3.24397I$	$-0.45716+6.47664I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.539561-0.979683I$ $a=-0.983442-0.483042I$ $b=\ \ 1.31460+1.41628I$	$-7.31597+5.19158I$	$-7.13412-5.50514I$
$u=-0.539561+0.979683I$ $a=-0.983442+0.483042I$ $b=\ \ 1.31460-1.41628I$	$-7.31597-5.19158I$	$-7.13412+5.50514I$
$u=-0.307590-0.697419I$ $a=-1.179949-0.437400I$ $b=\ \ 0.584375-0.606604I$	$-1.69174+2.07365I$	$-0.35018-3.75765I$
$u=-0.307590+0.697419I$ $a=-1.179949+0.437400I$ $b=\ \ 0.584375+0.606604I$	$-1.69174-2.07365I$	$-0.35018+3.75765I$
$u=-0.299852-1.192800I$ $a=\ \ 1.204775-0.173112I$ $b=-0.181867-0.911330I$	$-8.17971+6.88009I$	$-6.32444-5.98403I$
$u=-0.299852+1.192800I$ $a=\ \ 1.204775+0.173112I$ $b=-0.181867+0.911330I$	$-8.17971-6.88009I$	$-6.32444+5.98403I$
$u=-0.223189-0.473560I$ $a=-0.407288-0.415644I$ $b=-0.588695-0.710675I$	$0.08914+1.52136I$	$0.92288-3.10853I$
$u=-0.223189+0.473560I$ $a=-0.407288+0.415644I$ $b=-0.588695+0.710675I$	$0.08914-1.52136I$	$0.92288+3.10853I$
$u=\ \ 0.000901-0.445406I$ $a=\ \ 3.69660-1.84265I$ $b=\ \ 0.227140-0.595597I$	$-5.53864-3.01539I$	$-19.4332+8.4307I$
$u=\ \ 0.000901+0.445406I$ $a=\ \ 3.69660+1.84265I$ $b=\ \ 0.227140+0.595597I$	$-5.53864+3.01539I$	$-19.4332-8.4307I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.161175 - 0.349105I$ $a = 3.30875 - 1.31611I$ $b = -0.203979 + 1.309977I$	$-6.64861 - 0.13946I$	$-6.32934 + 0.07570I$
$u = 0.161175 + 0.349105I$ $a = 3.30875 + 1.31611I$ $b = -0.203979 - 1.309977I$	$-6.64861 + 0.13946I$	$-6.32934 - 0.07570I$
$u = 0.222891 - 0.173390I$ $a = 3.03718 - 1.65389I$ $b = -1.181954 + 0.206918I$	$0.48057 - 1.96275I$	$6.28895 + 2.92214I$
$u = 0.222891 + 0.173390I$ $a = 3.03718 + 1.65389I$ $b = -1.181954 - 0.206918I$	$0.48057 + 1.96275I$	$6.28895 - 2.92214I$
$u = 0.223247 - 0.733150I$ $a = -0.57721 - 1.32238I$ $b = 0.478818 - 0.735448I$	$-4.15031 + 0.75171I$	$-5.55583 + 1.52775I$
$u = 0.223247 + 0.733150I$ $a = -0.57721 + 1.32238I$ $b = 0.478818 + 0.735448I$	$-4.15031 - 0.75171I$	$-5.55583 - 1.52775I$
$u = 0.224592 - 1.103138I$ $a = -0.0614888 - 0.0773880I$ $b = 0.747558 + 0.713910I$	$-3.57991 + 4.96662I$	$-0.78194 - 5.62106I$
$u = 0.224592 + 1.103138I$ $a = -0.0614888 + 0.0773880I$ $b = 0.747558 - 0.713910I$	$-3.57991 - 4.96662I$	$-0.78194 + 5.62106I$
$u = 0.308920 - 0.321579I$ $a = -2.25812 + 1.22542I$ $b = 1.92160 + 0.42821I$	$-4.17954 - 7.17743I$	$1.10548 + 10.24381I$
$u = 0.308920 + 0.321579I$ $a = -2.25812 - 1.22542I$ $b = 1.92160 - 0.42821I$	$-4.17954 + 7.17743I$	$1.10548 - 10.24381I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.636544 - 0.230444I$ $a = 1.27435 - 0.81298I$ $b = -1.03529 + 1.13558I$	$0.77022 - 2.47923I$	$0.39058 - 8.23551I$
$u = 0.636544 + 0.230444I$ $a = 1.27435 + 0.81298I$ $b = -1.03529 - 1.13558I$	$0.77022 + 2.47923I$	$0.39058 + 8.23551I$
$u = 0.723525 - 0.554514I$ $a = 1.152803 + 0.612199I$ $b = -0.868791 + 0.810031I$	$1.66896 - 4.09599I$	$2.80131 + 9.03279I$
$u = 0.723525 + 0.554514I$ $a = 1.152803 - 0.612199I$ $b = -0.868791 - 0.810031I$	$1.66896 + 4.09599I$	$2.80131 - 9.03279I$
$u = 0.783244 - 0.988185I$ $a = -1.092514 + 0.378136I$ $b = 0.86821 - 1.35253I$	$-8.85403 - 4.69065I$	$-5.81787 + 4.01531I$
$u = 0.783244 + 0.988185I$ $a = -1.092514 - 0.378136I$ $b = 0.86821 + 1.35253I$	$-8.85403 + 4.69065I$	$-5.81787 - 4.01531I$
$u = 0.83604 - 1.24262I$ $a = -0.647217 + 0.481424I$ $b = 0.136133 - 0.745299I$	$-3.96912 + 1.82451I$	$-2.76104 - 2.92871I$
$u = 0.83604 + 1.24262I$ $a = -0.647217 - 0.481424I$ $b = 0.136133 + 0.745299I$	$-3.96912 - 1.82451I$	$-2.76104 + 2.92871I$
$u = 0.860595 - 0.757350I$ $a = -0.846219 - 0.544161I$ $b = 0.835203 - 0.947302I$	$-1.92721 - 10.19582I$	$0.72576 + 8.25674I$
$u = 0.860595 + 0.757350I$ $a = -0.846219 + 0.544161I$ $b = 0.835203 + 0.947302I$	$-1.92721 + 10.19582I$	$0.72576 - 8.25674I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.866958 - 0.207225I$ $a = -0.571049 - 0.451805I$ $b = 0.936750 + 0.956743I$	$-1.77283 - 3.70444I$	$2.15456 + 4.83060I$
$u = 0.866958 + 0.207225I$ $a = -0.571049 + 0.451805I$ $b = 0.936750 - 0.956743I$	$-1.77283 + 3.70444I$	$2.15456 - 4.83060I$
$u = 1.10129 - 1.06163I$ $a = 0.881434 - 0.438247I$ $b = -0.88904 + 1.33193I$	$-3.32542 - 9.91193I$	$-0.14733 + 6.82962I$
$u = 1.10129 + 1.06163I$ $a = 0.881434 + 0.438247I$ $b = -0.88904 - 1.33193I$	$-3.32542 + 9.91193I$	$-0.14733 - 6.82962I$
$u = 1.14876 - 1.24339I$ $a = -0.818110 + 0.354584I$ $b = 0.92101 - 1.32266I$	$-6.9242 - 15.9387I$	$-2.21564 + 8.66212I$
$u = 1.14876 + 1.24339I$ $a = -0.818110 - 0.354584I$ $b = 0.92101 + 1.32266I$	$-6.9242 + 15.9387I$	$-2.21564 - 8.66212I$
$u = 1.31875 - 1.79980I$ $a = 0.405736 - 0.355761I$ $b = -0.016053 + 0.631044I$	$-6.90749 + 6.01393I$	$-7.81339 - 6.22163I$
$u = 1.31875 + 1.79980I$ $a = 0.405736 + 0.355761I$ $b = -0.016053 - 0.631044I$	$-6.90749 - 6.01393I$	$-7.81339 + 6.22163I$
$u = 1.55967 - 0.51228I$ $a = 0.194064 - 0.780344I$ $b = 0.089967 + 0.920793I$	$-6.87032 - 1.61985I$	$-7.52046 + 1.01232I$
$u = 1.55967 + 0.51228I$ $a = 0.194064 + 0.780344I$ $b = 0.089967 - 0.920793I$	$-6.87032 + 1.61985I$	$-7.52046 - 1.01232I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{10} - u^9 + \cdots + 2u^2 + 1)(u^{60} + 6u^{59} + \cdots + 543u + 79)$
c_2	$(u^{10} + 2u^8 + 4u^7 + 2u^6 + 3u^5 + 6u^4 + 4u^3 + u^2 + u + 1)$ $(u^{60} + u^{59} + \cdots + 314u + 71)$
c_3	$(u^{10} + 5u^9 + \cdots + 5u + 1)(u^{60} + 4u^{59} + \cdots - 90u + 31)$
c_4	$(u^{10} - 5u^9 + 14u^8 - 24u^7 + 29u^6 - 24u^5 + 11u^4 + u^3 - 2u^2 - u + 1)$ $(u^{60} + 4u^{58} + \cdots + 28u + 3)$
c_5	$(u^{10} + u^9 + 5u^8 + 6u^7 + 12u^6 + 13u^5 + 15u^4 + 12u^3 + 9u^2 + 4u + 1)$ $(u^{60} + 4u^{59} + \cdots + 23u + 1)$
c_6	$(u^{10} - u^9 - 2u^8 + 4u^7 - 5u^5 + 5u^4 + 2u^3 - 4u^2 + 1)$ $(u^{60} + 2u^{59} + \cdots + 21u + 13)$
c_7	$(u^{10} + 3u^7 + 2u^6 + 2u^5 + 2u^4 + 3u^3 + 4u^2 + u + 1)$ $(u^{60} + u^{59} + \cdots + 1880u + 667)$
c_8	$(u^{10} - u^9 + 5u^8 - 6u^7 + 12u^6 - 13u^5 + 15u^4 - 12u^3 + 9u^2 - 4u + 1)$ $(u^{60} + 4u^{59} + \cdots + 23u + 1)$
c_9	$(u^{10} + 2u^8 + \cdots - u + 1)(u^{60} + u^{59} + \cdots - 22u + 1)$
c_{10}	$(u^{10} + u^9 - 2u^8 - 4u^7 + 5u^5 + 5u^4 - 2u^3 - 4u^2 + 1)$ $(u^{60} + 2u^{59} + \cdots + 21u + 13)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y^{10}+y^9+7y^8-y^7+12y^6+6y^5+18y^4+16y^3+12y^2+4y+1)$ $(y^{60}+14y^{59}+\cdots+122113y+6241)$
c_2	$(y^{10}+4y^9+8y^8+4y^7+6y^6-11y^5+12y^4-6y^3+5y^2+y+1)$ $(y^{60}+13y^{59}+\cdots+80466y+5041)$
c_3	$(y^{10}+3y^9+2y^8-8y^7-35y^6+138y^4+105y^3+27y^2+5y+1)$ $(y^{60}-16y^{59}+\cdots-65698y+961)$
c_4	$(y^{10}+3y^9+14y^8+18y^7+3y^6+46y^5+33y^4-35y^3+28y^2-5y+1)$ $(y^{60}+8y^{59}+\cdots+152y+9)$
c_5, c_8	$(y^{10}+9y^9+\cdots+2y+1)(y^{60}+46y^{59}+\cdots-77y+1)$
c_6, c_{10}	$(y^{10}-5y^9+\cdots-8y+1)(y^{60}-36y^{59}+\cdots-2183y+169)$
c_7	$(y^{10}+4y^8-5y^7-12y^5+2y^4+7y^3+14y^2+7y+1)$ $(y^{60}+21y^{59}+\cdots+11382388y+444889)$
c_9	$(y^{10}+4y^9+12y^8+16y^7+18y^6+6y^5+12y^4-y^3+7y^2+y+1)$ $(y^{60}+5y^{59}+\cdots-22y+1)$