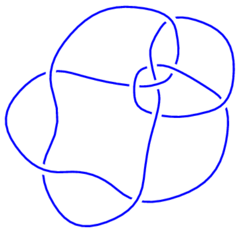
10_{163} $(K10n_{35})$



[1]

Arc Sequences

$\uparrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\uparrow$	$\downarrow$	$\downarrow$	$\downarrow$	$\uparrow$	$\downarrow$
4	5	7	9	10	4	3	1	2	3

Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{4} I_i^u \bigcap I_1^v$$

$$\begin{aligned}
I_1^u &= \langle b^8 - 4b^6 + 2b^5 + 3b^4 - b^3 + 3b^2 - 10b + 7,\ 3b^7 - 14b^5 - b^4 + 9b^3 + 2b^2 + 14b + 13u - 29, \\
&\quad b^7 + b^6 + b^5 + 4b^4 - 6b^3 - 4b^2 + 2b + 13a - 10\rangle \\
I_2^u &= \langle b^8 + b^7 - 2b^5 - 8b^4 - 7b^3 + 13b^2 + 8b + 3, \\
&\quad -28b^7 - 25b^6 - 17b^5 + 5b^4 + 181b^3 + 72b^2 - 293b + 203u - 1, \\
&\quad -44b^7 - 2b^6 + 52b^5 + 99b^4 + 301b^3 - 36b^2 - 941b + 203a + 160\rangle \\
I_3^u &= \langle u^6 - 2u^5 + 4u^4 - 4u^3 + 4u^2 - u + 1,\ -u^5 + u^4 - 2u^3 + a - 2,\ -u^5 + 2u^4 - 4u^3 + 4u^2 + b - 3u + 1\rangle \\
I_4^u &= \langle u^{14} + 5u^{13} + 15u^{12} + 30u^{11} + 47u^{10} + 55u^9 + 48u^8 + 22u^7 - 2u^6 - 17u^5 - 15u^4 - 14u^3 - 4u^2 + u + 5, \\
&\quad u^{13} + 5u^{12} + 15u^{11} + 31u^{10} + 50u^9 + 63u^8 + 61u^7 + 42u^6 + 17u^5 + u^4 - 8u^3 - 9u^2 + b - 8u + 1, \\
&\quad u^{13} - 10u^{11} - 45u^{10} - 108u^9 - 195u^8 - 267u^7 - 283u^6 - 212u^5 - 102u^4 - 20u^3 + 26u^2 + 5a + 41u + 41\rangle
\end{aligned}$$

$$I_1^v = \langle b + 1,\ v - 1,\ a\rangle$$

There are 5 irreducible components with 37 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. $I^u_1 = \langle b^8 - 4b^6 + 2b^5 + 3b^4 - b^3 + 3b^2 - 10b + 7,\ 3b^7 + 13u + \cdots + 14b - 29,\ b^7 + b^6 + \cdots + 13a - 10\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0 \\ -0.230769b^7 + 1.07692b^5 + \cdots - 1.07692b + 2.23077 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ 0.230769b^6 + 0.307692b^5 + \cdots + 0.384615b - 0.0769231 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.230769b^7 - 1.07692b^5 + \cdots + 1.07692b - 2.23077 \\ -0.230769b^7 + 1.07692b^5 + \cdots - 1.07692b + 2.23077 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.0769231b^7 - 0.0769231b^6 + \cdots - 0.153846b + 0.769231 \\ b \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.0769231b^7 - 0.0769231b^6 + \cdots - 1.15385b + 0.769231 \\ b \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.615385b^7 + 0.538462b^6 + \cdots + 1.76923b - 3.46154 \\ -1 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -0.230769b^7 + 1.07692b^5 + \cdots - 1.07692b + 2.23077 \\ 0.307692b^7 + 0.846154b^6 + \cdots + 1.84615b - 0.923077 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.307692b^7 + 0.384615b^6 + \cdots + 0.0769231b - 0.769231 \\ 0.153846b^7 + 0.307692b^6 + \cdots + 1.23077b - 0.923077 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.461538b^7 + 0.461538b^6 + \cdots + 0.923077b - 1.61538 \\ 0.307692b^7 - 0.769231b^5 + \cdots + 0.769231b - 1.30769 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{44}{13}b^7 + 4b^6 - \frac{136}{13}b^5 - \frac{84}{13}b^4 + \frac{80}{13}b^3 + \frac{12}{13}b^2 + \frac{188}{13}b - \frac{278}{13}$

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.070696 + 0.758745I$ $a = -0.878270 + 0.343518I$ $b = -1.77170 - 0.19130I$	$-5.03685 - 2.59539I$	$-13.53952 + 0.91892I$
$u = 1.070696 - 0.758745I$ $a = -0.878270 - 0.343518I$ $b = -1.77170 + 0.19130I$	$-5.03685 + 2.59539I$	$-13.53952 - 0.91892I$
$u = -0.070696 + 0.758745I$ $a = 0.87053 + 1.13328I$ $b = -0.350716 - 1.044375I$	$1.74699 - 2.59539I$	$1.53952 + 0.91892I$
$u = -0.070696 - 0.758745I$ $a = 0.87053 - 1.13328I$ $b = -0.350716 + 1.044375I$	$1.74699 + 2.59539I$	$1.53952 - 0.91892I$
$u = -0.070696 + 0.758745I$ $a = 1.32191 - 0.58540I$ $b = 0.921412 - 0.580396I$	$1.74699 - 2.59539I$	$1.53952 + 0.91892I$
$u = -0.070696 - 0.758745I$ $a = 1.32191 + 0.58540I$ $b = 0.921412 + 0.580396I$	$1.74699 + 2.59539I$	$1.53952 - 0.91892I$
$u = 1.070696 - 0.758745I$ $a = 1.185830 + 0.661666I$ $b = 1.201002 - 0.298580I$	$-5.03685 + 2.59539I$	$-13.53952 - 0.91892I$
$u = 1.070696 + 0.758745I$ $a = 1.185830 - 0.661666I$ $b = 1.201002 + 0.298580I$	$-5.03685 - 2.59539I$	$-13.53952 + 0.91892I$

II. $I_2^u = \langle b^8 + b^7 - 2b^5 - 8b^4 - 7b^3 + 13b^2 + 8b + 3,\ -28b^7 + 203u + \cdots - 293b - 1,\ -44b^7 - 2b^6 + \cdots + 203a + 160\rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ 0.137931b^7 + 0.123153b^6 + \cdots + 1.44335b + 0.00492611 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ 0.00985222b^7 + 0.182266b^6 + \cdots - 1.74384b - 0.581281 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -0.137931b^7 - 0.123153b^6 + \cdots - 1.44335b - 0.00492611 \\ 0.137931b^7 + 0.123153b^6 + \cdots + 1.44335b + 0.00492611 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.216749b^7 + 0.00985222b^6 + \cdots + 4.63547b - 0.788177 \\ b \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 0.216749b^7 + 0.00985222b^6 + \cdots + 3.63547b - 0.788177 \\ b \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -0.674877b^7 - 0.556650b^6 + \cdots - 10.4039b - 4.32512 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0.137931b^7 + 0.123153b^6 + \cdots + 1.44335b + 0.00492611 \\ 0.216749b^7 + 0.438424b^6 + \cdots + 0.778325b + 0.0689655 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -0.330049b^7 - 0.605911b^6 + \cdots - 2.58128b - 4.52709 \\ 0.0886700b^7 + 0.0689655b^6 + \cdots + 1.44828b - 0.374384 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0.197044b^7 - 0.0689655b^6 + \cdots + 2.55172b - 2.05419 \\ 0.152709b^7 + 0.0394089b^6 + \cdots + 2.54187b + 0.418719 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -\frac{264}{203}b^7 - \frac{12}{203}b^6 + \frac{312}{203}b^5 + \frac{1000}{203}b^4 + \frac{316}{29}b^3 + \frac{596}{203}b^2 - \frac{6052}{203}b - \frac{2694}{203}$

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.93338 + 1.13249I$ $a = -0.692709 + 0.652910I$ $b = -1.47465 - 0.63084I$	$-3.88602 - 4.68603I$	$-7.29059 + 10.27938I$
$u = 0.93338 - 1.13249I$ $a = -0.692709 - 0.652910I$ $b = -1.47465 + 0.63084I$	$-3.88602 + 4.68603I$	$-7.29059 - 10.27938I$
$u = -0.433380 - 0.525827I$ $a = -2.14039 - 1.49390I$ $b = -0.269251 - 0.341177I$	$0.59615 - 4.68603I$	$-4.70941 + 10.27938I$
$u = -0.433380 + 0.525827I$ $a = -2.14039 + 1.49390I$ $b = -0.269251 + 0.341177I$	$0.59615 + 4.68603I$	$-4.70941 - 10.27938I$
$u = -0.433380 - 0.525827I$ $a = -0.637691 - 0.013525I$ $b = -0.14207 - 1.77290I$	$0.59615 - 4.68603I$	$-4.70941 + 10.27938I$
$u = -0.433380 + 0.525827I$ $a = -0.637691 + 0.013525I$ $b = -0.14207 + 1.77290I$	$0.59615 + 4.68603I$	$-4.70941 - 10.27938I$
$u = 0.93338 - 1.13249I$ $a = 0.970793 + 0.502018I$ $b = 1.385972 - 0.175069I$	$-3.88602 + 4.68603I$	$-7.29059 - 10.27938I$
$u = 0.93338 + 1.13249I$ $a = 0.970793 - 0.502018I$ $b = 1.385972 + 0.175069I$	$-3.88602 - 4.68603I$	$-7.29059 + 10.27938I$

III. $I_3^u = \langle u^6 - 2u^5 + 4u^4 - 4u^3 + 4u^2 - u + 1,\ -u^5 + u^4 - 2u^3 + a - 2,\ -u^5 + 2u^4 - 4u^3 + 4u^2 + b - 3u + 1 \rangle$

(i) Arc colorings

$$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u^5 - u^4 + 2u^3 + 2 \\ u^5 - 2u^4 + 4u^3 - 4u^2 + 3u - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} u^4 - 2u^3 + 4u^2 - 3u + 3 \\ u^5 - 2u^4 + 4u^3 - 4u^2 + 3u - 1 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -2u^5 + 4u^4 - 7u^3 + 7u^2 - 6u \\ u^5 - u^4 + 2u^3 - u^2 + u + 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -u^5 + 2u^4 - 4u^3 + 3u^2 - 2u - 1 \\ u^2 - u + 1 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} u^5 - u^4 + u^3 + u^2 - u + 3 \\ -u^4 + 2u^3 - 3u^2 + 2u - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -3u^5 + 12u^4 - 19u^3 + 23u^2 - 16u + 6$

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.034417 - 0.580231I$ $a = 1.93912 + 0.34991I$ $b = 0.136288 - 1.137180I$	$1.27956 - 3.69612I$	$-0.43558 + 6.39872I$
$u = -0.034417 + 0.580231I$ $a = 1.93912 - 0.34991I$ $b = 0.136288 + 1.137180I$	$1.27956 + 3.69612I$	$-0.43558 - 6.39872I$
$u = 0.096993 - 1.308888I$ $a = -0.425821 - 0.085567I$ $b = -0.153300 + 0.549053I$	$4.36362 + 4.05299I$	$4.55288 - 5.52472I$
$u = 0.096993 + 1.308888I$ $a = -0.425821 + 0.085567I$ $b = -0.153300 - 0.549053I$	$4.36362 - 4.05299I$	$4.55288 + 5.52472I$
$u = 0.937424 - 0.916243I$ $a = -1.013299 - 0.581830I$ $b = -1.48299 + 0.38301I$	$-3.99825 + 3.41127I$	$-5.61730 - 2.91658I$
$u = 0.937424 + 0.916243I$ $a = -1.013299 + 0.581830I$ $b = -1.48299 - 0.38301I$	$-3.99825 - 3.41127I$	$-5.61730 + 2.91658I$

IV.

$\boldsymbol{I_4^u = \langle u^{14}+5u^{13}+\cdots+u+5,\ u^{13}+5u^{12}+\cdots+b+1,\ u^{13}-10u^{11}+\cdots+5a+41\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-u\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-\frac{1}{5}u^{13}+2u^{11}+\cdots-\frac{41}{5}u-\frac{41}{5}\\-u^{13}-5u^{12}+\cdots+8u-1\end{pmatrix}$$
$$a_1 = \begin{pmatrix}\frac{4}{5}u^{13}+5u^{12}+\cdots-\frac{81}{5}u-\frac{36}{5}\\-u^{13}-5u^{12}+\cdots+8u-1\end{pmatrix}$$
$$a_9 = \begin{pmatrix}\frac{11}{5}u^{13}+8u^{12}+\cdots+\frac{61}{5}u+\frac{51}{5}\\-u^{13}-u^{12}+\cdots-14u+6\end{pmatrix}$$
$$a_6 = \begin{pmatrix}u\\u^3+u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-\frac{9}{5}u^{13}-8u^{12}+\cdots+\frac{36}{5}u+\frac{26}{5}\\-u^{13}-4u^{12}+\cdots-6u-9\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-\frac{1}{5}u^{13}-u^{12}+\cdots-\frac{16}{5}u-\frac{16}{5}\\-2u^{12}-9u^{11}+\cdots+14u+4\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4u^{13}-5u^{12}+2u^{11}+43u^{10}+98u^9+192u^8+233u^7+231u^6+106u^5+55u^4-27u^3-21u^2-60u-6$

(iv) Complex Volumes and Cusp Shapes

Solution to I^u_4	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.104556 - 0.803929I$ $a = 0.895316 - 0.749503I$ $b = 1.59147 - 0.10810I$	$-6.35421 + 6.00703I$	$-6.42492 - 3.68584I$
$u = -1.104556 + 0.803929I$ $a = 0.895316 + 0.749503I$ $b = 1.59147 + 0.10810I$	$-6.35421 - 6.00703I$	$-6.42492 + 3.68584I$
$u = -0.91106 - 1.12096I$ $a = 1.113573 - 0.631511I$ $b = 1.72243 + 0.67293I$	$-5.3164 - 13.2900I$	$-4.73276 + 7.55975I$
$u = -0.91106 + 1.12096I$ $a = 1.113573 + 0.631511I$ $b = 1.72243 - 0.67293I$	$-5.3164 + 13.2900I$	$-4.73276 - 7.55975I$
$u = -0.809699 - 0.855443I$ $a = -1.48215 + 0.63750I$ $b = -1.74544 - 0.75171I$	$-4.94416 - 4.48113I$	$-10.56248 + 7.82532I$
$u = -0.809699 + 0.855443I$ $a = -1.48215 - 0.63750I$ $b = -1.74544 + 0.75171I$	$-4.94416 + 4.48113I$	$-10.56248 - 7.82532I$
$u = -0.752287 - 0.954057I$ $a = -0.769408 + 1.137546I$ $b = -1.66410 + 0.12170I$	$-4.62410 - 1.43381I$	$-9.01327 - 1.28996I$
$u = -0.752287 + 0.954057I$ $a = -0.769408 - 1.137546I$ $b = -1.66410 - 0.12170I$	$-4.62410 + 1.43381I$	$-9.01327 + 1.28996I$
$u = 0.17524 - 1.43298I$ $a = 0.028144 - 0.275446I$ $b = 0.389777 + 0.088598I$	$3.73877 + 3.84212I$	$-7.98139 - 1.57763I$
$u = 0.17524 + 1.43298I$ $a = 0.028144 + 0.275446I$ $b = 0.389777 - 0.088598I$	$3.73877 - 3.84212I$	$-7.98139 + 1.57763I$

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.269018 - 0.823102I$ $a = 0.678836 - 0.196935I$ $b = -0.020522 + 0.611730I$	$0.79193 + 2.01282I$	$-1.55516 - 4.15380I$
$u = 0.269018 + 0.823102I$ $a = 0.678836 + 0.196935I$ $b = -0.020522 - 0.611730I$	$0.79193 - 2.01282I$	$-1.55516 + 4.15380I$
$u = 0.633342 - 0.004347I$ $a = 0.435692 - 0.534977I$ $b = -0.273616 + 0.340717I$	$-1.38615 + 0.45192I$	$-8.23002 - 1.56844I$
$u = 0.633342 + 0.004347I$ $a = 0.435692 + 0.534977I$ $b = -0.273616 - 0.340717I$	$-1.38615 - 0.45192I$	$-8.23002 + 1.56844I$

V. $I_1^v = \langle b+1,\ v-1,\ a \rangle$

(i) Arc colorings

$a_3 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_8 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$

$a_{10} = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$

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

$a_9 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$

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

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

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

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -6$

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^v	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$v = 1.00000$ $a = 0$ $b = -1.00000$	-1.64493	-6.00000

VI. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_5	$(u+1)(u^6+u^5+2u^4+u^3+u^2+1)$ $(u^8-2u^7+4u^6+4u^5+3u^4+11u^3+17u^2+12u+9)$ $(u^8+u^7+2u^6-8u^5+6u^4-3u^3+9u^2-2u+1)$ $(u^{14}+4u^{12}+\cdots-2u+3)$
c_2, c_4	$(u-1)(u^6+u^4+\cdots-u+1)(u^8+4u^5+\cdots+2u+1)$ $(u^8+u^7+\cdots-2u+3)(u^{14}+u^{13}+\cdots+3u+1)$
c_3	$u(u^4+u^3+u^2-u+1)^2(u^4+2u^3+2u^2+u+1)^2$ $(u^6-2u^5+\cdots-u+1)(u^{14}-5u^{13}+\cdots-u+5)$
c_6, c_7	$u(u^4+u^3+u^2-u+1)^2(u^4+2u^3+2u^2+u+1)^2$ $(u^6+2u^5+\cdots+u+1)(u^{14}-5u^{13}+\cdots-u+5)$
c_8, c_{10}	$(u+1)(u^6-3u^5+4u^4-5u^3+5u^2-2u+1)$ $(u^8-4u^6+2u^5+3u^4-u^3+3u^2-10u+7)$ $(u^8+u^7+\cdots+8u+3)(u^{14}-10u^{12}+\cdots-2u+1)$
c_9	$u(u^4-2u^3+2u^2-u+1)^2(u^4-u^3+u^2+u+1)^2$ $(u^6+3u^5+\cdots-u^2+1)(u^{14}+10u^{13}+\cdots+28u+5)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y-1)(y^6+3y^5+4y^4+5y^3+5y^2+2y+1)$ $(y^8+3y^7+32y^6-16y^5+30y^4+71y^3+81y^2+14y+1)$ $(y^8+4y^7+38y^6+86y^5+123y^4-43y^3+79y^2+162y+81)$ $(y^{14}+8y^{13}+\cdots+62y+9)$
c_2, c_4	$(y-1)(y^6+2y^5+5y^4+5y^3+4y^2+3y+1)$ $(y^8+14y^6-14y^5+27y^4-11y^3+3y^2-2y+1)$ $(y^8+3y^7+16y^6+4y^5+34y^4-13y^3+37y^2-10y+9)$ $(y^{14}-5y^{13}+\cdots-13y+1)$
c_3, c_6, c_7	$y(y^4+2y^2+3y+1)^2(y^4+y^3+5y^2+y+1)^2$ $(y^6+4y^5+\cdots+7y+1)(y^{14}+5y^{13}+\cdots-41y+25)$
c_8, c_{10}	$(y-1)(y^6-y^5-4y^4+5y^3+13y^2+6y+1)$ $(y^8-8y^7+22y^6-22y^5+3y^4+y^3+31y^2-58y+49)$ $(y^8-y^7-12y^6+36y^5+26y^4-225y^3+233y^2+14y+9)$ $(y^{14}-20y^{13}+\cdots-6y+1)$
c_9	$y(y^4+2y^2+3y+1)^2(y^4+y^3+5y^2+y+1)^2$ $(y^6-y^5+\cdots-2y+1)(y^{14}+26y^{12}+\cdots+246y+25)$