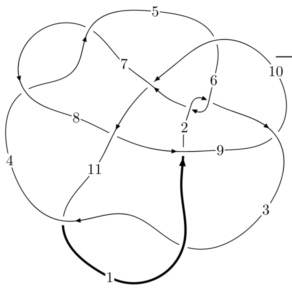
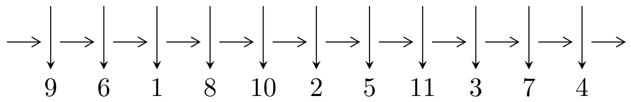
$11a_{329}$ ($K11a_{329}$)



A knot diagram[1]

Linearized knot diagam



Solving Sequence

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

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

$$I_1^u = \langle b-u,\ 7480949u^{26} + 102501940u^{25} + \cdots + 35850519a + 58313900,\ u^{27} + u^{26} + \cdots + 4u - 1\rangle$$
$$I_2^u = \langle -1.25488\times10^{119}u^{63} - 5.93390\times10^{119}u^{62} + \cdots + 1.36032\times10^{119}b - 4.57609\times10^{119},$$
$$-7.61826\times10^{119}u^{63} - 3.45060\times10^{120}u^{62} + \cdots + 4.08097\times10^{119}a + 8.20476\times10^{119},$$
$$u^{64} + 5u^{63} + \cdots + 9u + 1\rangle$$
$$I_3^u = \langle b+u,\ u^2 + a + u,\ u^3 + u - 1\rangle$$
$$I_4^u = \langle b+u,\ -2u^7 + u^6 - 7u^5 + u^4 - 10u^3 + a - 7u,\ u^8 - u^7 + 4u^6 - 2u^5 + 6u^4 - 2u^3 + 5u^2 - u + 1\rangle$$
$$I_5^u = \langle u^6 - u^5 + 3u^4 - 7u^3 + 6u^2 + 2b - 10u + 5,\ -5u^7 - 22u^5 + 12u^4 - 41u^3 + 24u^2 + 6a - 27u + 11,$$
$$u^8 + 5u^6 - 3u^5 + 10u^4 - 9u^3 + 9u^2 - 7u + 3\rangle$$

* 5 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 110 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. $\boldsymbol{I_1^u = \langle b - u,\ 7.48 \times 10^6 u^{26} + 1.03 \times 10^8 u^{25} + \cdots + 3.59 \times 10^7 a + 5.83 \times 10^7,\ u^{27} + u^{26} + \cdots + 4u - 1\rangle}$

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.208671u^{26} - 2.85915u^{25} + \cdots + 7.44217u - 1.62658 \\ u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -3.27801u^{26} + 5.32766u^{25} + \cdots + 46.4586u - 8.94242 \\ 1.20999u^{26} - 3.00055u^{25} + \cdots - 9.39324u + 2.65048 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.208671u^{26} - 2.85915u^{25} + \cdots + 6.44217u - 1.62658 \\ u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -2.58876u^{26} - 0.102742u^{25} + \cdots - 3.92105u - 2.07685 \\ 0.977408u^{26} + 0.220438u^{25} + \cdots - 3.89929u + 0.517993 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.65048u^{26} + 3.86047u^{25} + \cdots + 0.791902u + 1.20867 \\ -u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 3.03935u^{26} + 5.72431u^{25} + \cdots + 8.43055u - 4.17643 \\ -0.810224u^{26} - 2.02363u^{25} + \cdots - 2.57059u + 0.767074 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.606939u^{26} - 0.979932u^{25} + \cdots + 15.1011u - 3.18665 \\ 0.175698u^{26} - 1.25035u^{25} + \cdots - 0.849262u + 0.717414 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.606939u^{26} - 0.979932u^{25} + \cdots + 15.1011u - 3.18665 \\ 0.175698u^{26} - 1.25035u^{25} + \cdots - 0.849262u + 0.717414 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= \frac{26113891}{3983391}u^{26} + \frac{16946267}{3983391}u^{25} + \cdots - \frac{13443049}{442599}u - \frac{51593591}{3983391}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{27} - 2u^{26} + \cdots - 10u + 3$
c_2, c_6	$u^{27} + 8u^{26} + \cdots + 110u + 12$
c_3, c_4, c_7 c_{11}	$u^{27} - u^{26} + \cdots + 4u + 1$
c_5, c_9	$u^{27} + 12u^{25} + \cdots + 15u^2 + 1$
c_8	$u^{27} - 20u^{26} + \cdots - 1284u + 180$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{27} + 4y^{26} + \cdots + 4y - 9$
c_2, c_6	$y^{27} + 14y^{26} + \cdots + 700y - 144$
c_3, c_4, c_7 c_{11}	$y^{27} + 27y^{26} + \cdots - 4y - 1$
c_5, c_9	$y^{27} + 24y^{26} + \cdots - 30y - 1$
c_8	$y^{27} - 2y^{26} + \cdots + 561816y - 32400$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.886580+0.019207I$ $a=-1.057340+0.497197I$ $b=-0.886580+0.019207I$	$0.96030+6.99778I$	$-11.49841-6.31594I$
$u=-0.886580-0.019207I$ $a=-1.057340-0.497197I$ $b=-0.886580-0.019207I$	$0.96030-6.99778I$	$-11.49841+6.31594I$
$u=-0.236028+1.095620I$ $a=-0.798201+0.061958I$ $b=-0.236028+1.095620I$	$4.10301-1.11169I$	$-6.68347+2.36909I$
$u=-0.236028-1.095620I$ $a=-0.798201-0.061958I$ $b=-0.236028-1.095620I$	$4.10301+1.11169I$	$-6.68347-2.36909I$
$u=\ \ 0.868007+0.115359I$ $a=\ \ 0.768649-0.417549I$ $b=\ \ 0.868007+0.115359I$	$-2.19193+1.02446I$	$-11.23776-6.18138I$
$u=\ \ 0.868007-0.115359I$ $a=\ \ 0.768649+0.417549I$ $b=\ \ 0.868007-0.115359I$	$-2.19193-1.02446I$	$-11.23776+6.18138I$
$u=-0.003006+1.229040I$ $a=\ \ 1.65700-1.48184I$ $b=-0.003006+1.229040I$	$9.55943+6.00813I$	$-1.22265-6.13894I$
$u=-0.003006-1.229040I$ $a=\ \ 1.65700+1.48184I$ $b=-0.003006-1.229040I$	$9.55943-6.00813I$	$-1.22265+6.13894I$
$u=-0.045846+1.255570I$ $a=-1.24858-0.95153I$ $b=-0.045846+1.255570I$	$6.76407-1.62647I$	$-5.58254+2.60825I$
$u=-0.045846-1.255570I$ $a=-1.24858+0.95153I$ $b=-0.045846-1.255570I$	$6.76407+1.62647I$	$-5.58254-2.60825I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.029913 + 1.343500I$ $a = 0.37553 - 1.49753I$ $b = -0.029913 + 1.343500I$	$9.97119 - 1.49427I$	$0.080207 + 0.920031I$
$u = -0.029913 - 1.343500I$ $a = 0.37553 + 1.49753I$ $b = -0.029913 - 1.343500I$	$9.97119 + 1.49427I$	$0.080207 - 0.920031I$
$u = 0.524847 + 1.241400I$ $a = 0.633730 - 0.220695I$ $b = 0.524847 + 1.241400I$	$2.50522 - 4.33326I$	$-7.76207 - 3.39042I$
$u = 0.524847 - 1.241400I$ $a = 0.633730 + 0.220695I$ $b = 0.524847 - 1.241400I$	$2.50522 + 4.33326I$	$-7.76207 + 3.39042I$
$u = -0.580317 + 0.090563I$ $a = -0.597417 + 1.252030I$ $b = -0.580317 + 0.090563I$	$3.08469 - 2.64958I$	$-9.08747 + 2.09938I$
$u = -0.580317 - 0.090563I$ $a = -0.597417 - 1.252030I$ $b = -0.580317 - 0.090563I$	$3.08469 + 2.64958I$	$-9.08747 - 2.09938I$
$u = 0.10388 + 1.45531I$ $a = 0.370550 - 0.378802I$ $b = 0.10388 + 1.45531I$	$10.25310 - 0.47528I$	$-1.44372 + 0.I$
$u = 0.10388 - 1.45531I$ $a = 0.370550 + 0.378802I$ $b = 0.10388 - 1.45531I$	$10.25310 + 0.47528I$	$-1.44372 + 0.I$
$u = -0.45771 + 1.48529I$ $a = -0.908211 - 0.286969I$ $b = -0.45771 + 1.48529I$	$12.64960 + 6.10710I$	$-1.83403 - 3.86721I$
$u = -0.45771 - 1.48529I$ $a = -0.908211 + 0.286969I$ $b = -0.45771 - 1.48529I$	$12.64960 - 6.10710I$	$-1.83403 + 3.86721I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.47966 + 1.48279I$ $a = -1.135590 - 0.392236I$ $b = -0.47966 + 1.48279I$	$10.7046 + 17.4305I$	$-4.97020 - 8.80041I$
$u = -0.47966 - 1.48279I$ $a = -1.135590 + 0.392236I$ $b = -0.47966 - 1.48279I$	$10.7046 - 17.4305I$	$-4.97020 + 8.80041I$
$u = 0.47037 + 1.48644I$ $a = 1.021560 - 0.423137I$ $b = 0.47037 + 1.48644I$	$7.11389 - 11.36350I$	$-6.87134 + 6.73077I$
$u = 0.47037 - 1.48644I$ $a = 1.021560 + 0.423137I$ $b = 0.47037 - 1.48644I$	$7.11389 + 11.36350I$	$-6.87134 - 6.73077I$
$u = 0.275286$ $a = -0.867193$ $b = 0.275286$	-0.622366	-16.1230
$u = 0.114320 + 0.213263I$ $a = -1.14807 + 5.10834I$ $b = 0.114320 + 0.213263I$	$-1.14394 + 1.30778I$	$-18.3250 - 4.6536I$
$u = 0.114320 - 0.213263I$ $a = -1.14807 - 5.10834I$ $b = 0.114320 - 0.213263I$	$-1.14394 - 1.30778I$	$-18.3250 + 4.6536I$

II. $\boldsymbol{I_2^u = \langle -1.25\times 10^{119}u^{63} - 5.93\times 10^{119}u^{62} + \cdots + 1.36\times 10^{119}b - 4.58\times 10^{119},\ -7.62\times 10^{119}u^{63} - 3.45\times 10^{120}u^{62} + \cdots + 4.08\times 10^{119}a + 8.20\times 10^{119},\ u^{64} + 5u^{63} + \cdots + 9u + 1\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_5 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1.86678u^{63} + 8.45535u^{62} + \cdots + 13.0919u - 2.01050\\0.922490u^{63} + 4.36213u^{62} + \cdots + 19.0193u + 3.36397\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-2.07092u^{63} - 9.95817u^{62} + \cdots - 51.5217u - 6.64500\\-0.765928u^{63} - 3.73638u^{62} + \cdots - 20.4529u - 4.25401\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.944287u^{63} + 4.09322u^{62} + \cdots - 5.92732u - 5.37447\\0.922490u^{63} + 4.36213u^{62} + \cdots + 19.0193u + 3.36397\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-1.92058u^{63} - 9.65347u^{62} + \cdots - 55.0762u - 11.3256\\0.0555653u^{63} + 0.244446u^{62} + \cdots + 4.82412u + 0.229347\end{pmatrix}$$
$$a_3 = \begin{pmatrix}5.08294u^{63} + 24.8391u^{62} + \cdots + 104.384u + 17.2019\\-0.828932u^{63} - 4.33500u^{62} + \cdots - 13.7757u + 0.631299\end{pmatrix}$$
$$a_7 = \begin{pmatrix}u\\u^3 + u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}-3.21107u^{63} - 15.6228u^{62} + \cdots - 65.7787u - 11.6119\\0.348757u^{63} + 1.59825u^{62} + \cdots + 16.3904u + 1.14200\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1.54638u^{63} + 7.15847u^{62} + \cdots + 9.16166u - 2.57721\\0.647718u^{63} + 2.94801u^{62} + \cdots + 12.6636u + 2.49217\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1.54638u^{63} + 7.15847u^{62} + \cdots + 9.16166u - 2.57721\\0.647718u^{63} + 2.94801u^{62} + \cdots + 12.6636u + 2.49217\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -1.07366u^{63} - 4.33095u^{62} + \cdots + 40.1271u + 1.41454$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^{64} + 2u^{63} + \cdots - 126u + 177$
c_2, c_6	$(u^{32} - 3u^{31} + \cdots - 10u + 3)^2$
c_3, c_4, c_7 c_{11}	$u^{64} - 5u^{63} + \cdots - 9u + 1$
c_5, c_9	$u^{64} - u^{63} + \cdots - 16935u + 15481$
c_8	$(u^{32} + 10u^{31} + \cdots + 99u + 19)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^{64} + 4y^{63} + \cdots + 305202y + 31329$
c_2, c_6	$(y^{32} + 21y^{31} + \cdots + 74y + 9)^2$
c_3, c_4, c_7 c_{11}	$y^{64} + 49y^{63} + \cdots - 3y + 1$
c_5, c_9	$y^{64} + 11y^{63} + \cdots + 3729627377y + 239661361$
c_8	$(y^{32} + 18y^{31} + \cdots + 3461y + 361)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.920222 + 0.395412I$ $a = -0.129317 + 1.135090I$ $b = -0.151131 + 1.300520I$	$3.42651 + 2.86570I$	$-5.40728 - 4.03056I$
$u = 0.920222 - 0.395412I$ $a = -0.129317 - 1.135090I$ $b = -0.151131 - 1.300520I$	$3.42651 - 2.86570I$	$-5.40728 + 4.03056I$
$u = -0.063212 + 0.940817I$ $a = 0.717133 + 0.574436I$ $b = 0.804979 - 0.202940I$	$-0.168876 + 0.846731I$	$-12.88022 - 0.77932I$
$u = -0.063212 - 0.940817I$ $a = 0.717133 - 0.574436I$ $b = 0.804979 + 0.202940I$	$-0.168876 - 0.846731I$	$-12.88022 + 0.77932I$
$u = 0.294249 + 1.039510I$ $a = -1.105040 + 0.363187I$ $b = -0.685111 - 0.128372I$	$1.25382 - 4.32436I$	0
$u = 0.294249 - 1.039510I$ $a = -1.105040 - 0.363187I$ $b = -0.685111 + 0.128372I$	$1.25382 + 4.32436I$	0
$u = 0.804979 + 0.202940I$ $a = -0.872180 - 0.573156I$ $b = -0.063212 - 0.940817I$	$-0.168876 - 0.846731I$	$-12.88022 + 0.77932I$
$u = 0.804979 - 0.202940I$ $a = -0.872180 + 0.573156I$ $b = -0.063212 + 0.940817I$	$-0.168876 + 0.846731I$	$-12.88022 - 0.77932I$
$u = -0.271195 + 1.153980I$ $a = 1.63456 + 0.62464I$ $b = 0.336277 - 1.364760I$	$4.73825 + 4.95632I$	0
$u = -0.271195 - 1.153980I$ $a = 1.63456 - 0.62464I$ $b = 0.336277 + 1.364760I$	$4.73825 - 4.95632I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.053296 + 1.199700I$ $a = 0.715928 + 0.774703I$ $b = 0.42436 - 1.68610I$	$5.82389 + 3.48280I$	0
$u = -0.053296 - 1.199700I$ $a = 0.715928 - 0.774703I$ $b = 0.42436 + 1.68610I$	$5.82389 - 3.48280I$	0
$u = -0.087790 + 1.202470I$ $a = -0.397620 + 0.281730I$ $b = -1.04393 - 1.82190I$	$8.11459 + 3.37630I$	0
$u = -0.087790 - 1.202470I$ $a = -0.397620 - 0.281730I$ $b = -1.04393 + 1.82190I$	$8.11459 - 3.37630I$	0
$u = -0.612602 + 0.471856I$ $a = 0.025706 + 1.164300I$ $b = 0.232794 + 1.231510I$	$2.52109 - 1.66996I$	$-6.36037 - 2.48874I$
$u = -0.612602 - 0.471856I$ $a = 0.025706 - 1.164300I$ $b = 0.232794 - 1.231510I$	$2.52109 + 1.66996I$	$-6.36037 + 2.48874I$
$u = 0.452635 + 1.145970I$ $a = -1.69479 + 0.14216I$ $b = -0.297614 - 1.338770I$	$5.87133 - 7.92548I$	0
$u = 0.452635 - 1.145970I$ $a = -1.69479 - 0.14216I$ $b = -0.297614 + 1.338770I$	$5.87133 + 7.92548I$	0
$u = -0.201492 + 1.219100I$ $a = -0.686845 + 0.005818I$ $b = -1.382930 + 0.232456I$	$6.90028 + 0.03721I$	0
$u = -0.201492 - 1.219100I$ $a = -0.686845 - 0.005818I$ $b = -1.382930 - 0.232456I$	$6.90028 - 0.03721I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -1.197290 + 0.312647I$ $a = -0.707406 + 0.535648I$ $b = -0.398045 + 1.299040I$	$5.08314 + 11.58170I$	0
$u = -1.197290 - 0.312647I$ $a = -0.707406 - 0.535648I$ $b = -0.398045 - 1.299040I$	$5.08314 - 11.58170I$	0
$u = 0.232794 + 1.231510I$ $a = -0.633433 + 0.339154I$ $b = -0.612602 + 0.471856I$	$2.52109 - 1.66996I$	0
$u = 0.232794 - 1.231510I$ $a = -0.633433 - 0.339154I$ $b = -0.612602 - 0.471856I$	$2.52109 + 1.66996I$	0
$u = -0.339847 + 1.221780I$ $a = 0.956485 - 0.589998I$ $b = 0.120701 - 0.199374I$	$6.38478 + 6.22988I$	0
$u = -0.339847 - 1.221780I$ $a = 0.956485 + 0.589998I$ $b = 0.120701 + 0.199374I$	$6.38478 - 6.22988I$	0
$u = 0.276431 + 1.243720I$ $a = -0.639083 - 0.172102I$ $b = -0.230618 + 0.105542I$	$2.72784 - 2.52152I$	0
$u = 0.276431 - 1.243720I$ $a = -0.639083 + 0.172102I$ $b = -0.230618 - 0.105542I$	$2.72784 + 2.52152I$	0
$u = 0.397836 + 1.218830I$ $a = 0.644295 - 0.250433I$ $b = 1.211970 + 0.440132I$	$1.24375 - 5.55297I$	0
$u = 0.397836 - 1.218830I$ $a = 0.644295 + 0.250433I$ $b = 1.211970 - 0.440132I$	$1.24375 + 5.55297I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.211970 + 0.440132I$ $a = 0.590869 + 0.351158I$ $b = 0.397836 + 1.218830I$	$1.24375 - 5.55297I$	0
$u = 1.211970 - 0.440132I$ $a = 0.590869 - 0.351158I$ $b = 0.397836 - 1.218830I$	$1.24375 + 5.55297I$	0
$u = -0.685111 + 0.128372I$ $a = 1.26615 - 1.28343I$ $b = 0.294249 - 1.039510I$	$1.25382 + 4.32436I$	$-10.17044 - 8.05596I$
$u = -0.685111 - 0.128372I$ $a = 1.26615 + 1.28343I$ $b = 0.294249 + 1.039510I$	$1.25382 - 4.32436I$	$-10.17044 + 8.05596I$
$u = -0.151131 + 1.300520I$ $a = 0.803730 + 0.343215I$ $b = 0.920222 + 0.395412I$	$3.42651 + 2.86570I$	0
$u = -0.151131 - 1.300520I$ $a = 0.803730 - 0.343215I$ $b = 0.920222 - 0.395412I$	$3.42651 - 2.86570I$	0
$u = 0.090336 + 1.330560I$ $a = -0.986962 + 0.344993I$ $b = -0.62803 - 1.48659I$	$11.25570 - 7.19139I$	0
$u = 0.090336 - 1.330560I$ $a = -0.986962 - 0.344993I$ $b = -0.62803 + 1.48659I$	$11.25570 + 7.19139I$	0
$u = -0.398045 + 1.299040I$ $a = -0.753479 - 0.292200I$ $b = -1.197290 + 0.312647I$	$5.08314 + 11.58170I$	0
$u = -0.398045 - 1.299040I$ $a = -0.753479 + 0.292200I$ $b = -1.197290 - 0.312647I$	$5.08314 - 11.58170I$	0

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.297614 + 1.338770I$ $a = 1.48376 + 0.36485I$ $b = 0.452635 - 1.145970I$	$5.87133 + 7.92548I$	0
$u = -0.297614 - 1.338770I$ $a = 1.48376 - 0.36485I$ $b = 0.452635 + 1.145970I$	$5.87133 - 7.92548I$	0
$u = -1.382930 + 0.232456I$ $a = -0.191453 + 0.574145I$ $b = -0.201492 + 1.219100I$	$6.90028 + 0.03721I$	0
$u = -1.382930 - 0.232456I$ $a = -0.191453 - 0.574145I$ $b = -0.201492 - 1.219100I$	$6.90028 - 0.03721I$	0
$u = 0.336277 + 1.364760I$ $a = -1.38413 + 0.51193I$ $b = -0.271195 - 1.153980I$	$4.73825 - 4.95632I$	0
$u = 0.336277 - 1.364760I$ $a = -1.38413 - 0.51193I$ $b = -0.271195 + 1.153980I$	$4.73825 + 4.95632I$	0
$u = -0.39852 + 1.36564I$ $a = 0.121970 - 0.518027I$ $b = -0.214549 + 0.185839I$	$5.08106 - 2.21530I$	0
$u = -0.39852 - 1.36564I$ $a = 0.121970 + 0.518027I$ $b = -0.214549 - 0.185839I$	$5.08106 + 2.21530I$	0
$u = -0.269264 + 0.401570I$ $a = 1.63873 + 1.71309I$ $b = 0.463669 + 0.019406I$	$-1.16995 + 1.22634I$	$-14.0955 - 5.1640I$
$u = -0.269264 - 0.401570I$ $a = 1.63873 - 1.71309I$ $b = 0.463669 - 0.019406I$	$-1.16995 - 1.22634I$	$-14.0955 + 5.1640I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.463669 + 0.019406I$ $a = -2.41332 + 0.52542I$ $b = -0.269264 + 0.401570I$	$-1.16995 + 1.22634I$	$-14.0955 - 5.1640I$
$u = 0.463669 - 0.019406I$ $a = -2.41332 - 0.52542I$ $b = -0.269264 - 0.401570I$	$-1.16995 - 1.22634I$	$-14.0955 + 5.1640I$
$u = -0.62803 + 1.48659I$ $a = 0.863992 + 0.003752I$ $b = 0.090336 - 1.330560I$	$11.25570 + 7.19139I$	0
$u = -0.62803 - 1.48659I$ $a = 0.863992 - 0.003752I$ $b = 0.090336 + 1.330560I$	$11.25570 - 7.19139I$	0
$u = -0.214549 + 0.185839I$ $a = -0.89406 - 2.51300I$ $b = -0.39852 + 1.36564I$	$5.08106 - 2.21530I$	$-7.36537 + 6.15916I$
$u = -0.214549 - 0.185839I$ $a = -0.89406 + 2.51300I$ $b = -0.39852 - 1.36564I$	$5.08106 + 2.21530I$	$-7.36537 - 6.15916I$
$u = 0.42436 + 1.68610I$ $a = -0.591850 + 0.424891I$ $b = -0.053296 - 1.199700I$	$5.82389 - 3.48280I$	0
$u = 0.42436 - 1.68610I$ $a = -0.591850 - 0.424891I$ $b = -0.053296 + 1.199700I$	$5.82389 + 3.48280I$	0
$u = -0.230618 + 0.105542I$ $a = -1.51626 + 2.95895I$ $b = 0.276431 + 1.243720I$	$2.72784 - 2.52152I$	$-6.98017 + 1.90432I$
$u = -0.230618 - 0.105542I$ $a = -1.51626 - 2.95895I$ $b = 0.276431 - 1.243720I$	$2.72784 + 2.52152I$	$-6.98017 - 1.90432I$

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \quad 0.120701 + 0.199374I$ $a = -4.14581 - 4.49501I$ $b = -0.339847 - 1.221780I$	$6.38478 - 6.22988I$	$-5.40289 + 5.47727I$
$u = \quad 0.120701 - 0.199374I$ $a = -4.14581 + 4.49501I$ $b = -0.339847 + 1.221780I$	$6.38478 + 6.22988I$	$-5.40289 - 5.47727I$
$u = -1.04393 + 1.82190I$ $a = \quad 0.279733 + 0.006501I$ $b = -0.087790 - 1.202470I$	$8.11459 - 3.37630I$	0
$u = -1.04393 - 1.82190I$ $a = \quad 0.279733 - 0.006501I$ $b = -0.087790 + 1.202470I$	$8.11459 + 3.37630I$	0

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

(i) Arc colorings

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

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

$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^2-u \\ -u \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^2-2u \\ u^2+u-1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^2 \\ -u \end{pmatrix}$$

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

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

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

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

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

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

(ii) Obstruction class $= 1$

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

(iv) u-Polynomials at the component

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

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_6, c_7 c_{10}, c_{11}	$y^3 + 2y^2 + y - 1$
c_5, c_9	$y^3 - y^2 + 10y - 1$
c_8	$y^3 + 7y^2 + 10y - 9$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.341164 + 1.161540I$ $a = \quad 1.57395 - 0.36899I$ $b = \quad 0.341164 - 1.161540I$	$7.76697 + 7.91583I$	$-2.23117 - 8.07622I$
$u = -0.341164 - 1.161540I$ $a = \quad 1.57395 + 0.36899I$ $b = \quad 0.341164 + 1.161540I$	$7.76697 - 7.91583I$	$-2.23117 + 8.07622I$
$u = \quad 0.682328$ $a = -1.14790$ $b = -0.682328$	-2.37447	-16.5380

IV. $I^u_4 = \langle b+u,\ -2u^7+u^6-7u^5+u^4-10u^3+a-7u,\ u^8-u^7+4u^6-2u^5+6u^4-2u^3+5u^2-u+1\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 2u^7-u^6+7u^5-u^4+10u^3+7u \\ -u \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 4u^7-2u^6+12u^5-u^4+16u^3+10u+1 \\ -u^6-2u^4-u^3-3u^2-1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 2u^7-u^6+7u^5-u^4+10u^3+8u \\ -u \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -u^6-u^5-3u^4-2u^3-5u^2-2u-3 \\ -u^7-2u^5-u^4-2u^3-u^2-u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} u^7-u^6+3u^5-2u^4+4u^3-2u^2+2u-1 \\ -u^2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u^3+u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} u^7-2u^6+5u^5-5u^4+7u^3-6u^2+6u-3 \\ u^2 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 3u^7-2u^6+10u^5-2u^4+13u^3-u^2+9u \\ 0 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 3u^7-2u^6+10u^5-2u^4+13u^3-u^2+9u \\ 0 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -u^6+u^5-2u^4+3u^3+2u^2+7u+1$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^8 + 2u^7 + 2u^6 + 3u^5 + 3u^4 + 3u^3 + 3u^2 + u + 1$
c_2	$u^8 + 3u^7 + 6u^6 + 8u^5 + 8u^4 + 7u^3 + 5u^2 + 2u + 1$
c_3, c_7	$u^8 + u^7 + 4u^6 + 2u^5 + 6u^4 + 2u^3 + 5u^2 + u + 1$
c_4, c_{11}	$u^8 - u^7 + 4u^6 - 2u^5 + 6u^4 - 2u^3 + 5u^2 - u + 1$
c_5, c_9	$u^8 + 3u^7 + 4u^6 + 5u^5 + 5u^4 + 4u^3 + 4u^2 + 2u + 1$
c_6	$u^8 - 3u^7 + 6u^6 - 8u^5 + 8u^4 - 7u^3 + 5u^2 - 2u + 1$
c_8	$u^8 - 6u^7 + 19u^6 - 35u^5 + 38u^4 - 25u^3 + 10u^2 - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^8 - 2y^6 - 3y^5 + y^4 + 7y^3 + 9y^2 + 5y + 1$
c_2, c_6	$y^8 + 3y^7 + 4y^6 + 2y^4 + 11y^3 + 13y^2 + 6y + 1$
c_3, c_4, c_7 c_{11}	$y^8 + 7y^7 + 24y^6 + 50y^5 + 68y^4 + 60y^3 + 33y^2 + 9y + 1$
c_5, c_9	$y^8 - y^7 - 4y^6 - y^5 + 7y^4 + 12y^3 + 10y^2 + 4y + 1$
c_8	$y^8 + 2y^7 + 17y^6 - 61y^5 + 52y^4 + 33y^3 + 76y^2 + 16y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_4^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.506251 + 0.960489I$ $a = 0.249506 - 0.196383I$ $b = 0.506251 - 0.960489I$	$5.85877 - 1.31073I$	$-1.64360 + 0.98117I$
$u = -0.506251 - 0.960489I$ $a = 0.249506 + 0.196383I$ $b = 0.506251 + 0.960489I$	$5.85877 + 1.31073I$	$-1.64360 - 0.98117I$
$u = 0.302896 + 1.275450I$ $a = -1.64863 + 0.55513I$ $b = -0.302896 - 1.275450I$	$5.44517 - 5.83722I$	$-3.39356 + 6.57107I$
$u = 0.302896 - 1.275450I$ $a = -1.64863 - 0.55513I$ $b = -0.302896 + 1.275450I$	$5.44517 + 5.83722I$	$-3.39356 - 6.57107I$
$u = 0.584835 + 1.175860I$ $a = -0.684107 + 0.080025I$ $b = -0.584835 - 1.175860I$	$2.64533 - 4.83456I$	$-3.93301 + 10.95748I$
$u = 0.584835 - 1.175860I$ $a = -0.684107 - 0.080025I$ $b = -0.584835 + 1.175860I$	$2.64533 + 4.83456I$	$-3.93301 - 10.95748I$
$u = 0.118520 + 0.521695I$ $a = 0.08323 + 2.62717I$ $b = -0.118520 - 0.521695I$	$-0.789792 + 1.148200I$	$0.97016 + 3.66325I$
$u = 0.118520 - 0.521695I$ $a = 0.08323 - 2.62717I$ $b = -0.118520 + 0.521695I$	$-0.789792 - 1.148200I$	$0.97016 - 3.66325I$

V. $\boldsymbol{I^u_5 = \langle u^6 - u^5 + 3u^4 - 7u^3 + 6u^2 + 2b - 10u + 5,\ -5u^7 - 22u^5 + \cdots + 6a + 11,\ u^8 + 5u^6 - 3u^5 + 10u^4 - 9u^3 + 9u^2 - 7u + 3\rangle}$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{5}{6}u^7 + \frac{11}{3}u^5 + \cdots + \frac{9}{2}u - \frac{11}{6} \\ -\frac{1}{2}u^6 + \frac{1}{2}u^5 + \cdots + 5u - \frac{5}{2} \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -\frac{1}{6}u^7 - \frac{1}{3}u^5 + \cdots + \frac{3}{2}u + \frac{1}{6} \\ \frac{1}{2}u^7 + 2u^5 + \cdots + \frac{5}{2}u + \frac{1}{2} \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{5}{6}u^7 + \frac{1}{2}u^6 + \cdots - \frac{1}{2}u + \frac{2}{3} \\ -\frac{1}{2}u^6 + \frac{1}{2}u^5 + \cdots + 5u - \frac{5}{2} \end{pmatrix}$$
$$a_2 = \begin{pmatrix} \frac{2}{3}u^7 + u^6 + \cdots - 3u + \frac{13}{3} \\ -\frac{1}{2}u^7 - \frac{1}{2}u^6 + \cdots + \frac{5}{2}u + 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} -\frac{7}{6}u^7 + u^6 + \cdots - \frac{13}{2}u + \frac{19}{6} \\ u^7 - \frac{1}{2}u^6 + \cdots + 4u + \frac{1}{2} \end{pmatrix}$$
$$a_7 = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$
$$a_6 = \begin{pmatrix} \frac{1}{6}u^7 + 2u^6 + \cdots - \frac{9}{2}u + \frac{5}{6} \\ u^7 - u^6 + 5u^5 - 6u^4 + 13u^3 - 11u^2 + 11u - 5 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{5}{6}u^7 + u^6 + \cdots - \frac{3}{2}u + \frac{7}{6} \\ -\frac{1}{2}u^6 + \frac{1}{2}u^5 + \cdots + 6u - \frac{5}{2} \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{5}{6}u^7 + u^6 + \cdots - \frac{3}{2}u + \frac{7}{6} \\ -\frac{1}{2}u^6 + \frac{1}{2}u^5 + \cdots + 6u - \frac{5}{2} \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= \frac{5}{2}u^7 - \frac{1}{2}u^6 + \frac{13}{2}u^5 - \frac{21}{2}u^4 + 5u^3 - 13u^2 - \frac{1}{2}u - 9$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$u^8 - 5u^7 + 9u^6 - 3u^5 - 8u^4 + 7u^3 + 3u^2 - 2u + 1$
c_2	$(u^4 - u^3 + 2u^2 + 1)^2$
c_3, c_7	$u^8 + 5u^6 + 3u^5 + 10u^4 + 9u^3 + 9u^2 + 7u + 3$
c_4, c_{11}	$u^8 + 5u^6 - 3u^5 + 10u^4 - 9u^3 + 9u^2 - 7u + 3$
c_5, c_9	$u^8 + 2u^6 + 2u^5 + 3u^4 + 4u^3 + 7u^2 + 7u + 3$
c_6	$(u^4 + u^3 + 2u^2 + 1)^2$
c_8	$(u^4 + u + 1)^2$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$y^8 - 7y^7 + 35y^6 - 77y^5 + 142y^4 - 91y^3 + 21y^2 + 2y + 1$
c_2, c_6	$(y^4 + 3y^3 + 6y^2 + 4y + 1)^2$
c_3, c_4, c_7 c_{11}	$y^8 + 10y^7 + 45y^6 + 109y^5 + 142y^4 + 87y^3 + 15y^2 + 5y + 9$
c_5, c_9	$y^8 + 4y^7 + 10y^6 + 22y^5 + 27y^4 + 10y^3 + 11y^2 - 7y + 9$
c_8	$(y^4 + 2y^2 - y + 1)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.095575 + 1.200900I$ $a = 0.307939 - 0.630003I$ $b = 0.63156 + 1.63091I$	$7.71788 + 3.38562I$	$-9.43066 - 4.92823I$
$u = -0.095575 - 1.200900I$ $a = 0.307939 + 0.630003I$ $b = 0.63156 - 1.63091I$	$7.71788 - 3.38562I$	$-9.43066 + 4.92823I$
$u = 0.154365 + 1.248590I$ $a = -0.807775 + 0.482499I$ $b = -0.572771 + 0.314492I$	$2.15173 - 2.37936I$	$-12.06934 + 4.77691I$
$u = 0.154365 - 1.248590I$ $a = -0.807775 - 0.482499I$ $b = -0.572771 - 0.314492I$	$2.15173 + 2.37936I$	$-12.06934 - 4.77691I$
$u = 0.572771 + 0.314492I$ $a = -0.28741 + 1.78865I$ $b = -0.154365 + 1.248590I$	$2.15173 + 2.37936I$	$-12.06934 - 4.77691I$
$u = 0.572771 - 0.314492I$ $a = -0.28741 - 1.78865I$ $b = -0.154365 - 1.248590I$	$2.15173 - 2.37936I$	$-12.06934 + 4.77691I$
$u = -0.63156 + 1.63091I$ $a = -0.379420 - 0.298919I$ $b = 0.095575 + 1.200900I$	$7.71788 - 3.38562I$	$-9.43066 + 4.92823I$
$u = -0.63156 - 1.63091I$ $a = -0.379420 + 0.298919I$ $b = 0.095575 - 1.200900I$	$7.71788 + 3.38562I$	$-9.43066 - 4.92823I$

VI. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1, c_{10}	$(u^3+u+1)(u^8-5u^7+9u^6-3u^5-8u^4+7u^3+3u^2-2u+1)$ $\cdot(u^8+2u^7+2u^6+3u^5+3u^4+3u^3+3u^2+u+1)$ $\cdot(u^{27}-2u^{26}+\cdots-10u+3)(u^{64}+2u^{63}+\cdots-126u+177)$
c_2	$(u^3+u-1)(u^4-u^3+2u^2+1)^2$ $\cdot(u^8+3u^7+6u^6+8u^5+8u^4+7u^3+5u^2+2u+1)$ $\cdot(u^{27}+8u^{26}+\cdots+110u+12)(u^{32}-3u^{31}+\cdots-10u+3)^2$
c_3, c_7	$(u^3+u+1)(u^8+5u^6+3u^5+10u^4+9u^3+9u^2+7u+3)$ $\cdot(u^8+u^7+\cdots+u+1)(u^{27}-u^{26}+\cdots+4u+1)$ $\cdot(u^{64}-5u^{63}+\cdots-9u+1)$
c_4, c_{11}	$(u^3+u-1)(u^8+5u^6-3u^5+10u^4-9u^3+9u^2-7u+3)$ $\cdot(u^8-u^7+\cdots-u+1)(u^{27}-u^{26}+\cdots+4u+1)$ $\cdot(u^{64}-5u^{63}+\cdots-9u+1)$
c_5, c_9	$(u^3-3u^2+4u-1)(u^8+2u^6+2u^5+3u^4+4u^3+7u^2+7u+3)$ $\cdot(u^8+3u^7+4u^6+5u^5+5u^4+4u^3+4u^2+2u+1)$ $\cdot(u^{27}+12u^{25}+\cdots+15u^2+1)(u^{64}-u^{63}+\cdots-16935u+15481)$
c_6	$(u^3+u+1)(u^4+u^3+2u^2+1)^2$ $\cdot(u^8-3u^7+6u^6-8u^5+8u^4-7u^3+5u^2-2u+1)$ $\cdot(u^{27}+8u^{26}+\cdots+110u+12)(u^{32}-3u^{31}+\cdots-10u+3)^2$
c_8	$(u^3-u^2+4u-3)(u^4+u+1)^2$ $\cdot(u^8-6u^7+19u^6-35u^5+38u^4-25u^3+10u^2-2u+1)$ $\cdot(u^{27}-20u^{26}+\cdots-1284u+180)(u^{32}+10u^{31}+\cdots+99u+19)^2$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_{10}	$(y^3+2y^2+y-1)(y^8-2y^6-3y^5+y^4+7y^3+9y^2+5y+1)$ $\cdot(y^8-7y^7+35y^6-77y^5+142y^4-91y^3+21y^2+2y+1)$ $\cdot(y^{27}+4y^{26}+\cdots+4y-9)(y^{64}+4y^{63}+\cdots+305202y+31329)$
c_2, c_6	$(y^3+2y^2+y-1)(y^4+3y^3+6y^2+4y+1)^2$ $\cdot(y^8+3y^7+4y^6+2y^4+11y^3+13y^2+6y+1)$ $\cdot(y^{27}+14y^{26}+\cdots+700y-144)(y^{32}+21y^{31}+\cdots+74y+9)^2$
c_3, c_4, c_7 c_{11}	(y^3+2y^2+y-1) $\cdot(y^8+7y^7+24y^6+50y^5+68y^4+60y^3+33y^2+9y+1)$ $\cdot(y^8+10y^7+45y^6+109y^5+142y^4+87y^3+15y^2+5y+9)$ $\cdot(y^{27}+27y^{26}+\cdots-4y-1)(y^{64}+49y^{63}+\cdots-3y+1)$
c_5, c_9	$(y^3-y^2+10y-1)(y^8-y^7+\cdots+4y+1)$ $\cdot(y^8+4y^7+10y^6+22y^5+27y^4+10y^3+11y^2-7y+9)$ $\cdot(y^{27}+24y^{26}+\cdots-30y-1)$ $\cdot(y^{64}+11y^{63}+\cdots+3729627377y+239661361)$
c_8	$(y^3+7y^2+10y-9)(y^4+2y^2-y+1)^2$ $\cdot(y^8+2y^7+17y^6-61y^5+52y^4+33y^3+76y^2+16y+1)$ $\cdot(y^{27}-2y^{26}+\cdots+561816y-32400)$ $\cdot(y^{32}+18y^{31}+\cdots+3461y+361)^2$