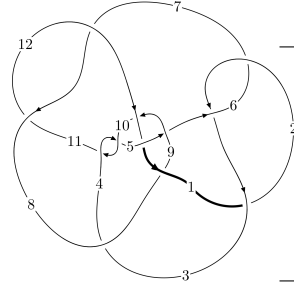
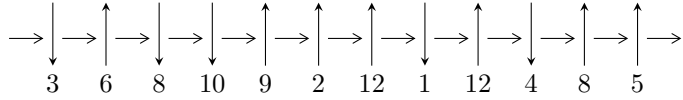


12n₀₃₉₆ (K12n₀₃₉₆)



A knot diagram¹

Linearized knot diagram



Solving Sequence

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

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -2.96098 \times 10^{119} u^{60} - 8.03566 \times 10^{119} u^{59} + \dots + 1.57498 \times 10^{117} b - 7.94333 \times 10^{120}, \\ -4.40897 \times 10^{120} u^{60} - 1.19687 \times 10^{121} u^{59} + \dots + 2.99247 \times 10^{118} a - 1.18579 \times 10^{122}, \\ u^{61} + 2u^{60} + \dots - 76u - 19 \rangle$$

$$I_2^u = \langle -1.15866 \times 10^{17} u^{27} + 2.41753 \times 10^{17} u^{26} + \dots + 7.07730 \times 10^{17} b + 1.02954 \times 10^{18}, \\ 3.01367 \times 10^{17} u^{27} + 5.60690 \times 10^{16} u^{26} + \dots + 7.07730 \times 10^{17} a + 1.80278 \times 10^{18}, u^{28} - u^{27} + \dots - u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 89 representations.

¹The 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>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\mathbf{I. } I_1^u = \langle -2.96 \times 10^{119} u^{60} - 8.04 \times 10^{119} u^{59} + \dots + 1.57 \times 10^{117} b - 7.94 \times 10^{120}, -4.41 \times 10^{120} u^{60} - 1.20 \times 10^{121} u^{59} + \dots + 2.99 \times 10^{118} a - 1.19 \times 10^{122}, u^{61} + 2u^{60} + \dots - 76u - 19 \rangle$$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 147.336u^{60} + 399.962u^{59} + \dots + 21361.8u + 3962.58 \\ 188.001u^{60} + 510.206u^{59} + \dots + 27232.1u + 5043.44 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 39.5209u^{60} + 107.101u^{59} + \dots + 5741.11u + 1070.30 \\ 182.349u^{60} + 493.732u^{59} + \dots + 26284.5u + 4863.37 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -40.6653u^{60} - 110.244u^{59} + \dots - 5870.31u - 1080.86 \\ 188.001u^{60} + 510.206u^{59} + \dots + 27232.1u + 5043.44 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 76.4909u^{60} + 207.985u^{59} + \dots + 11163.0u + 2075.69 \\ -219.319u^{60} - 594.616u^{59} + \dots - 31704.4u - 5868.76 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 126.765u^{60} + 344.336u^{59} + \dots + 18391.7u + 3413.23 \\ 103.129u^{60} + 279.972u^{59} + \dots + 14952.3u + 2768.79 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 43.5638u^{60} + 118.466u^{59} + \dots + 6304.28u + 1174.55 \\ 105.291u^{60} + 285.368u^{59} + \dots + 15160.1u + 2799.38 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -28.7474u^{60} - 81.0140u^{59} + \dots - 4637.56u - 879.035 \\ 16.0573u^{60} + 44.4956u^{59} + \dots + 2463.99u + 460.188 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -23.6360u^{60} - 64.3645u^{59} + \dots - 3439.43u - 644.437 \\ -103.129u^{60} - 279.972u^{59} + \dots - 14952.3u - 2768.79 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 86.9161u^{60} + 235.789u^{59} + \dots + 12531.9u + 2321.16 \\ 223.821u^{60} + 605.501u^{59} + \dots + 32142.9u + 5936.73 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $21.9680u^{60} + 64.0290u^{59} + \dots + 3263.11u + 632.215$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{61} + 25u^{60} + \dots + 1370u - 1$
c_2, c_6	$u^{61} - u^{60} + \dots + 34u + 1$
c_3	$u^{61} - u^{60} + \dots + 4446u - 457$
c_4, c_{10}	$u^{61} - u^{60} + \dots - 1806u - 419$
c_5	$u^{61} - 4u^{60} + \dots + 1708u - 491$
c_7, c_{11}	$u^{61} + u^{60} + \dots + 99546436u - 13493731$
c_8	$u^{61} + 5u^{60} + \dots - 3032u - 3995$
c_9	$u^{61} + 14u^{60} + \dots - 96977u - 34681$
c_{12}	$u^{61} - 2u^{60} + \dots - 76u + 19$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{61} + 37y^{60} + \dots + 1971254y - 1$
c_2, c_6	$y^{61} + 25y^{60} + \dots + 1370y - 1$
c_3	$y^{61} + 121y^{60} + \dots + 5985624y - 208849$
c_4, c_{10}	$y^{61} + 89y^{60} + \dots - 560482y - 175561$
c_5	$y^{61} - 16y^{60} + \dots - 1860166y - 241081$
c_7, c_{11}	$y^{61} - 103y^{60} + \dots - 592149097680014y - 182080776300361$
c_8	$y^{61} + 15y^{60} + \dots - 71386126y - 15960025$
c_9	$y^{61} - 50y^{60} + \dots + 15117817107y - 1202771761$
c_{12}	$y^{61} - 8y^{60} + \dots + 11324y - 361$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.726966 + 0.679000I$ $a = -0.230767 - 0.059357I$ $b = -1.380190 + 0.112865I$	$-0.39695 + 7.20473I$	0
$u = 0.726966 - 0.679000I$ $a = -0.230767 + 0.059357I$ $b = -1.380190 - 0.112865I$	$-0.39695 - 7.20473I$	0
$u = -0.875047 + 0.392404I$ $a = -0.47290 + 2.04945I$ $b = -1.125280 - 0.174220I$	$13.1897 - 5.2499I$	0
$u = -0.875047 - 0.392404I$ $a = -0.47290 - 2.04945I$ $b = -1.125280 + 0.174220I$	$13.1897 + 5.2499I$	0
$u = -0.686697 + 0.668109I$ $a = -0.142029 - 0.279533I$ $b = -0.950069 - 0.505344I$	$0.97517 - 2.05582I$	0
$u = -0.686697 - 0.668109I$ $a = -0.142029 + 0.279533I$ $b = -0.950069 + 0.505344I$	$0.97517 + 2.05582I$	0
$u = -0.771408 + 0.558902I$ $a = 0.855387 + 0.424717I$ $b = -0.529958 + 0.377542I$	$1.45455 - 2.20607I$	0
$u = -0.771408 - 0.558902I$ $a = 0.855387 - 0.424717I$ $b = -0.529958 - 0.377542I$	$1.45455 + 2.20607I$	0
$u = 0.869455 + 0.365490I$ $a = -0.68027 - 2.08352I$ $b = -0.861856 + 0.200205I$	$13.34180 - 0.97900I$	0
$u = 0.869455 - 0.365490I$ $a = -0.68027 + 2.08352I$ $b = -0.861856 - 0.200205I$	$13.34180 + 0.97900I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.705296 + 0.787110I$		
$a = 0.365472 - 0.248330I$	$-3.39919 + 1.16742I$	0
$b = -0.616614 - 0.573787I$		
$u = 0.705296 - 0.787110I$		
$a = 0.365472 + 0.248330I$	$-3.39919 - 1.16742I$	0
$b = -0.616614 + 0.573787I$		
$u = 0.812877 + 0.431384I$		
$a = 0.549432 - 0.418684I$	$0.36729 - 2.80634I$	0
$b = -0.504160 - 0.006726I$		
$u = 0.812877 - 0.431384I$		
$a = 0.549432 + 0.418684I$	$0.36729 + 2.80634I$	0
$b = -0.504160 + 0.006726I$		
$u = -0.780322 + 0.432313I$		
$a = -0.74003 + 1.52918I$	$7.59223 - 1.75046I$	$0. + 3.23996I$
$b = -1.62681 + 0.60427I$		
$u = -0.780322 - 0.432313I$		
$a = -0.74003 - 1.52918I$	$7.59223 + 1.75046I$	$0. - 3.23996I$
$b = -1.62681 - 0.60427I$		
$u = -0.782122 + 0.813062I$		
$a = 0.920690 - 0.309572I$	$-0.92589 - 1.49460I$	0
$b = 0.090638 + 0.459504I$		
$u = -0.782122 - 0.813062I$		
$a = 0.920690 + 0.309572I$	$-0.92589 + 1.49460I$	0
$b = 0.090638 - 0.459504I$		
$u = 0.766937 + 0.356712I$		
$a = -0.78300 - 1.73528I$	$7.96502 + 1.47006I$	$1.19768 - 5.86407I$
$b = -0.748000 - 1.154520I$		
$u = 0.766937 - 0.356712I$		
$a = -0.78300 + 1.73528I$	$7.96502 - 1.47006I$	$1.19768 + 5.86407I$
$b = -0.748000 + 1.154520I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.820762 + 0.035126I$ $a = 0.025762 - 1.070560I$ $b = 0.96419 - 1.42306I$	$2.72013 - 4.69538I$	$8.21020 + 6.35662I$
$u = -0.820762 - 0.035126I$ $a = 0.025762 + 1.070560I$ $b = 0.96419 + 1.42306I$	$2.72013 + 4.69538I$	$8.21020 - 6.35662I$
$u = -0.668997 + 0.434762I$ $a = -1.35708 + 1.70611I$ $b = -2.67172 + 1.77247I$	$12.42490 + 1.87507I$	$8.22328 + 3.06573I$
$u = -0.668997 - 0.434762I$ $a = -1.35708 - 1.70611I$ $b = -2.67172 - 1.77247I$	$12.42490 - 1.87507I$	$8.22328 - 3.06573I$
$u = 0.663299 + 0.399729I$ $a = -1.23402 - 1.94571I$ $b = -2.27338 - 2.29267I$	$12.56990 + 4.12429I$	$8.83070 - 8.92853I$
$u = 0.663299 - 0.399729I$ $a = -1.23402 + 1.94571I$ $b = -2.27338 + 2.29267I$	$12.56990 - 4.12429I$	$8.83070 + 8.92853I$
$u = -0.999522 + 0.784828I$ $a = 0.339017 - 0.929172I$ $b = 1.18055 - 1.23638I$	$-0.26229 - 4.50672I$	0
$u = -0.999522 - 0.784828I$ $a = 0.339017 + 0.929172I$ $b = 1.18055 + 1.23638I$	$-0.26229 + 4.50672I$	0
$u = -0.673114 + 0.229923I$ $a = -1.17312 + 1.10043I$ $b = 1.004440 - 0.010897I$	$1.87484 - 5.76780I$	$8.27915 + 6.01369I$
$u = -0.673114 - 0.229923I$ $a = -1.17312 - 1.10043I$ $b = 1.004440 + 0.010897I$	$1.87484 + 5.76780I$	$8.27915 - 6.01369I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.711299 + 0.000372I$ $a = 0.176203 + 0.946068I$ $b = 1.49076 + 1.19282I$	$3.84612 - 0.01760I$	$12.41131 + 0.33539I$
$u = 0.711299 - 0.000372I$ $a = 0.176203 - 0.946068I$ $b = 1.49076 - 1.19282I$	$3.84612 + 0.01760I$	$12.41131 - 0.33539I$
$u = 0.690752 + 0.149932I$ $a = -1.24503 - 0.94277I$ $b = 1.053100 + 0.036616I$	$3.60663 + 0.64270I$	$10.66774 - 1.11520I$
$u = 0.690752 - 0.149932I$ $a = -1.24503 + 0.94277I$ $b = 1.053100 - 0.036616I$	$3.60663 - 0.64270I$	$10.66774 + 1.11520I$
$u = 0.666210$ $a = -0.620179$ $b = 1.36454$	2.55102	-1.40580
$u = 1.091640 + 0.786832I$ $a = 0.082122 + 0.498308I$ $b = 0.739742 + 0.883315I$	$-2.15310 + 4.74224I$	0
$u = 1.091640 - 0.786832I$ $a = 0.082122 - 0.498308I$ $b = 0.739742 - 0.883315I$	$-2.15310 - 4.74224I$	0
$u = 1.079410 + 0.861460I$ $a = -0.087453 + 1.131980I$ $b = 1.16805 + 1.07452I$	$4.14492 + 9.07328I$	0
$u = 1.079410 - 0.861460I$ $a = -0.087453 - 1.131980I$ $b = 1.16805 - 1.07452I$	$4.14492 - 9.07328I$	0
$u = -1.101140 + 0.886669I$ $a = 0.120210 - 1.120340I$ $b = 1.123830 - 0.809916I$	$4.47537 - 2.71866I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.101140 - 0.886669I$ $a = 0.120210 + 1.120340I$ $b = 1.123830 + 0.809916I$	$4.47537 + 2.71866I$	0
$u = -1.00173 + 1.00324I$ $a = 0.864058 - 0.327243I$ $b = 1.50512 + 0.06717I$	$3.99030 - 4.68111I$	0
$u = -1.00173 - 1.00324I$ $a = 0.864058 + 0.327243I$ $b = 1.50512 - 0.06717I$	$3.99030 + 4.68111I$	0
$u = -0.284071 + 0.480320I$ $a = 0.653928 - 0.889307I$ $b = 0.192049 - 0.368264I$	$0.126806 - 1.131010I$	$1.48638 + 6.15892I$
$u = -0.284071 - 0.480320I$ $a = 0.653928 + 0.889307I$ $b = 0.192049 + 0.368264I$	$0.126806 + 1.131010I$	$1.48638 - 6.15892I$
$u = 0.96181 + 1.10808I$ $a = 0.850926 + 0.018700I$ $b = 1.121250 - 0.516410I$	$3.31319 - 1.80350I$	0
$u = 0.96181 - 1.10808I$ $a = 0.850926 - 0.018700I$ $b = 1.121250 + 0.516410I$	$3.31319 + 1.80350I$	0
$u = -1.19981 + 0.95170I$ $a = -0.586023 + 1.122640I$ $b = -1.74762 + 1.13918I$	$14.2638 - 15.4086I$	0
$u = -1.19981 - 0.95170I$ $a = -0.586023 - 1.122640I$ $b = -1.74762 - 1.13918I$	$14.2638 + 15.4086I$	0
$u = -0.413783 + 0.174153I$ $a = -1.22718 + 1.44451I$ $b = 0.779070 + 0.027625I$	$-0.577442 + 0.867661I$	$3.54220 - 1.55941I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.413783 - 0.174153I$ $a = -1.22718 - 1.44451I$ $b = 0.779070 - 0.027625I$	$-0.577442 - 0.867661I$	$3.54220 + 1.55941I$
$u = 1.21410 + 1.00732I$ $a = -0.684959 - 1.075550I$ $b = -1.74677 - 0.90885I$	$16.2354 + 8.5140I$	0
$u = 1.21410 - 1.00732I$ $a = -0.684959 + 1.075550I$ $b = -1.74677 + 0.90885I$	$16.2354 - 8.5140I$	0
$u = -0.94282 + 1.34692I$ $a = -1.065560 + 0.485760I$ $b = -1.079560 - 0.281696I$	$13.0287 + 7.2582I$	0
$u = -0.94282 - 1.34692I$ $a = -1.065560 - 0.485760I$ $b = -1.079560 + 0.281696I$	$13.0287 - 7.2582I$	0
$u = 1.10472 + 1.30488I$ $a = -0.983159 - 0.647679I$ $b = -1.302950 + 0.023682I$	$15.3849 + 0.0125I$	0
$u = 1.10472 - 1.30488I$ $a = -0.983159 + 0.647679I$ $b = -1.302950 - 0.023682I$	$15.3849 - 0.0125I$	0
$u = -1.38674 + 1.15686I$ $a = -0.681273 + 0.791297I$ $b = -1.232310 + 0.599781I$	$7.54707 - 4.86571I$	0
$u = -1.38674 - 1.15686I$ $a = -0.681273 - 0.791297I$ $b = -1.232310 - 0.599781I$	$7.54707 + 4.86571I$	0
$u = 0.65643 + 1.91854I$ $a = 0.380740 + 0.457124I$ $b = 0.302176 + 0.330402I$	$-5.84281 + 2.46686I$	0

	Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.65643 - 1.91854I$		
$a =$	$0.380740 - 0.457124I$	$-5.84281 - 2.46686I$	0
$b =$	$0.302176 - 0.330402I$		

II.

$$I_2^u = \langle -1.16 \times 10^{17} u^{27} + 2.42 \times 10^{17} u^{26} + \dots + 7.08 \times 10^{17} b + 1.03 \times 10^{18}, 3.01 \times 10^{17} u^{27} + 5.61 \times 10^{16} u^{26} + \dots + 7.08 \times 10^{17} a + 1.80 \times 10^{18}, u^{28} - u^{27} + \dots - u + 1 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_5 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_{12} &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_1 &= \begin{pmatrix} 1 \\ -u^2 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -0.425822u^{27} - 0.0792238u^{26} + \dots - 3.95926u - 2.54727 \\ 0.163715u^{27} - 0.341590u^{26} + \dots - 1.74850u - 1.45471 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 2.75982u^{27} - 2.52025u^{26} + \dots + 11.4180u - 4.43000 \\ 1.63228u^{27} - 1.16592u^{26} + \dots + 7.03643u - 1.81633 \end{pmatrix} \\ a_9 &= \begin{pmatrix} -0.589537u^{27} + 0.262366u^{26} + \dots - 2.21075u - 1.09257 \\ 0.163715u^{27} - 0.341590u^{26} + \dots - 1.74850u - 1.45471 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.226629u^{27} - 0.385302u^{26} + \dots + 3.03735u - 1.54642 \\ 0.900907u^{27} - 0.969026u^{26} + \dots + 3.34424u - 1.06726 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -0.816329u^{27} + 0.184047u^{26} + \dots - 3.69689u - 2.22010 \\ 0.239570u^{27} - 0.350091u^{26} + \dots - 1.67019u - 1.75982 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -0.816986u^{27} + 0.686655u^{26} + \dots - 2.11709u + 1.42597 \\ -0.505046u^{27} + 0.265362u^{26} + \dots - 2.97310u + 0.425822 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -0.533956u^{27} + 0.229556u^{26} + \dots - 3.31604u - 0.492592 \\ -0.246269u^{27} - 0.205594u^{26} + \dots - 1.24312u - 1.67842 \end{pmatrix} \\ a_7 &= \begin{pmatrix} -1.05590u^{27} + 0.534138u^{26} + \dots - 2.02670u - 0.460285 \\ 0.239570u^{27} - 0.350091u^{26} + \dots - 1.67019u - 1.75982 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 1.42582u^{27} + 0.0792238u^{26} + \dots + 10.9593u + 5.54727 \\ 0.186139u^{27} + 0.260571u^{26} + \dots + 3.88003u + 4.05232 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = -\frac{1324489982334781349}{707729639082377921} u^{27} + \frac{406096222270673532}{707729639082377921} u^{26} + \dots - \frac{701121119184732213}{707729639082377921} u + \frac{6006310912169242997}{707729639082377921}$$

(iv) u -Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{28} - 18u^{27} + \dots - 119u + 9$
c_2	$u^{28} + 9u^{26} + \dots + u + 3$
c_3	$u^{28} + 15u^{26} + \dots - 309u + 99$
c_4	$u^{28} + 15u^{26} + \dots + 3u + 1$
c_5	$u^{28} - u^{27} + \dots - 7u + 1$
c_6	$u^{28} + 9u^{26} + \dots - u + 3$
c_7	$u^{28} - 2u^{27} + \dots + 7u + 1$
c_8	$u^{28} - 4u^{26} + \dots + 3u + 1$
c_9	$u^{28} + 7u^{27} + \dots + 6u + 1$
c_{10}	$u^{28} + 15u^{26} + \dots - 3u + 1$
c_{11}	$u^{28} + 2u^{27} + \dots - 7u + 1$
c_{12}	$u^{28} - u^{27} + \dots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{28} - 2y^{27} + \dots + 563y + 81$
c_2, c_6	$y^{28} + 18y^{27} + \dots + 119y + 9$
c_3	$y^{28} + 30y^{27} + \dots + 57969y + 9801$
c_4, c_{10}	$y^{28} + 30y^{27} + \dots + 27y + 1$
c_5	$y^{28} + y^{27} + \dots - 25y + 1$
c_7, c_{11}	$y^{28} - 14y^{27} + \dots + 15y + 1$
c_8	$y^{28} - 8y^{27} + \dots + 15y + 1$
c_9	$y^{28} - 21y^{27} + \dots + 10y + 1$
c_{12}	$y^{28} + y^{27} + \dots + 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.702052 + 0.710332I$		
$a = 0.857396 - 0.334821I$	$-1.74769 - 0.16344I$	$0.141433 - 0.136539I$
$b = -0.263227 + 0.411890I$		
$u = -0.702052 - 0.710332I$		
$a = 0.857396 + 0.334821I$	$-1.74769 + 0.16344I$	$0.141433 + 0.136539I$
$b = -0.263227 - 0.411890I$		
$u = 0.929799 + 0.320741I$		
$a = 0.096618 + 0.339668I$	$1.14047 - 3.70350I$	$4.84363 + 4.23194I$
$b = 1.032050 - 0.370405I$		
$u = 0.929799 - 0.320741I$		
$a = 0.096618 - 0.339668I$	$1.14047 + 3.70350I$	$4.84363 - 4.23194I$
$b = 1.032050 + 0.370405I$		
$u = 0.807818 + 0.736725I$		
$a = 0.702139 + 0.301480I$	$-1.67195 + 2.90344I$	$1.31719 - 4.53689I$
$b = 0.004590 - 0.562515I$		
$u = 0.807818 - 0.736725I$		
$a = 0.702139 - 0.301480I$	$-1.67195 - 2.90344I$	$1.31719 + 4.53689I$
$b = 0.004590 + 0.562515I$		
$u = 0.161477 + 0.864236I$		
$a = 1.125520 - 0.462351I$	$2.01588 + 0.05500I$	$4.86588 - 0.08812I$
$b = 0.303103 + 0.274488I$		
$u = 0.161477 - 0.864236I$		
$a = 1.125520 + 0.462351I$	$2.01588 - 0.05500I$	$4.86588 + 0.08812I$
$b = 0.303103 - 0.274488I$		
$u = 0.871653 + 0.745728I$		
$a = 0.338920 + 0.812501I$	$0.59797 + 8.54813I$	$3.23391 - 9.48208I$
$b = 1.55229 + 0.65793I$		
$u = 0.871653 - 0.745728I$		
$a = 0.338920 - 0.812501I$	$0.59797 - 8.54813I$	$3.23391 + 9.48208I$
$b = 1.55229 - 0.65793I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.816267 + 0.837532I$ $a = 0.357595 - 0.800294I$ $b = 1.265940 - 0.477611I$	$2.12233 - 3.64186I$	$4.74207 + 4.00458I$
$u = -0.816267 - 0.837532I$ $a = 0.357595 + 0.800294I$ $b = 1.265940 + 0.477611I$	$2.12233 + 3.64186I$	$4.74207 - 4.00458I$
$u = 0.777892 + 0.262089I$ $a = -0.52453 - 1.82829I$ $b = -1.23714 - 1.08838I$	$8.42193 + 1.08621I$	$12.97797 + 3.21719I$
$u = 0.777892 - 0.262089I$ $a = -0.52453 + 1.82829I$ $b = -1.23714 + 1.08838I$	$8.42193 - 1.08621I$	$12.97797 - 3.21719I$
$u = -0.402909 + 0.676482I$ $a = 1.371320 - 0.071287I$ $b = -0.186336 - 0.319339I$	$0.62992 - 5.52513I$	$1.53066 + 4.97462I$
$u = -0.402909 - 0.676482I$ $a = 1.371320 + 0.071287I$ $b = -0.186336 + 0.319339I$	$0.62992 + 5.52513I$	$1.53066 - 4.97462I$
$u = 0.999978 + 0.725902I$ $a = 0.311176 + 0.821553I$ $b = 1.34379 + 1.18837I$	$-1.03388 + 2.66855I$	$3.05978 - 0.97697I$
$u = 0.999978 - 0.725902I$ $a = 0.311176 - 0.821553I$ $b = 1.34379 - 1.18837I$	$-1.03388 - 2.66855I$	$3.05978 + 0.97697I$
$u = -1.132400 + 0.517279I$ $a = -0.584826 + 1.142560I$ $b = -0.898312 + 0.872745I$	$6.57826 - 3.10189I$	$4.06886 + 3.92167I$
$u = -1.132400 - 0.517279I$ $a = -0.584826 - 1.142560I$ $b = -0.898312 - 0.872745I$	$6.57826 + 3.10189I$	$4.06886 - 3.92167I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.678921 + 0.199447I$ $a = -0.374227 - 0.491947I$ $b = 1.340810 + 0.233735I$	$2.95059 - 0.55691I$	$5.48175 + 6.90028I$
$u = -0.678921 - 0.199447I$ $a = -0.374227 + 0.491947I$ $b = 1.340810 - 0.233735I$	$2.95059 + 0.55691I$	$5.48175 - 6.90028I$
$u = -1.089850 + 0.744629I$ $a = 0.280576 - 0.817045I$ $b = 1.00656 - 1.25835I$	$-0.47467 - 5.44176I$	$1.37883 + 9.36383I$
$u = -1.089850 - 0.744629I$ $a = 0.280576 + 0.817045I$ $b = 1.00656 + 1.25835I$	$-0.47467 + 5.44176I$	$1.37883 - 9.36383I$
$u = 0.115959 + 0.392417I$ $a = -4.32508 - 1.45221I$ $b = -2.18796 - 0.36120I$	$12.51090 + 3.10926I$	$6.97168 - 1.87926I$
$u = 0.115959 - 0.392417I$ $a = -4.32508 + 1.45221I$ $b = -2.18796 + 0.36120I$	$12.51090 - 3.10926I$	$6.97168 + 1.87926I$
$u = 0.65783 + 1.97053I$ $a = 0.367396 + 0.471354I$ $b = 0.423846 + 0.324990I$	$-5.72113 + 2.57039I$	0
$u = 0.65783 - 1.97053I$ $a = 0.367396 - 0.471354I$ $b = 0.423846 - 0.324990I$	$-5.72113 - 2.57039I$	0

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{28} - 18u^{27} + \dots - 119u + 9)(u^{61} + 25u^{60} + \dots + 1370u - 1)$
c_2	$(u^{28} + 9u^{26} + \dots + u + 3)(u^{61} - u^{60} + \dots + 34u + 1)$
c_3	$(u^{28} + 15u^{26} + \dots - 309u + 99)(u^{61} - u^{60} + \dots + 4446u - 457)$
c_4	$(u^{28} + 15u^{26} + \dots + 3u + 1)(u^{61} - u^{60} + \dots - 1806u - 419)$
c_5	$(u^{28} - u^{27} + \dots - 7u + 1)(u^{61} - 4u^{60} + \dots + 1708u - 491)$
c_6	$(u^{28} + 9u^{26} + \dots - u + 3)(u^{61} - u^{60} + \dots + 34u + 1)$
c_7	$(u^{28} - 2u^{27} + \dots + 7u + 1)(u^{61} + u^{60} + \dots + 9.95464 \times 10^7 u - 1.34937 \times 10^7)$
c_8	$(u^{28} - 4u^{26} + \dots + 3u + 1)(u^{61} + 5u^{60} + \dots - 3032u - 3995)$
c_9	$(u^{28} + 7u^{27} + \dots + 6u + 1)(u^{61} + 14u^{60} + \dots - 96977u - 34681)$
c_{10}	$(u^{28} + 15u^{26} + \dots - 3u + 1)(u^{61} - u^{60} + \dots - 1806u - 419)$
c_{11}	$(u^{28} + 2u^{27} + \dots - 7u + 1)(u^{61} + u^{60} + \dots + 9.95464 \times 10^7 u - 1.34937 \times 10^7)$
c_{12}	$(u^{28} - u^{27} + \dots - u + 1)(u^{61} - 2u^{60} + \dots - 76u + 19)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{28} - 2y^{27} + \dots + 563y + 81)(y^{61} + 37y^{60} + \dots + 1971254y - 1)$
c_2, c_6	$(y^{28} + 18y^{27} + \dots + 119y + 9)(y^{61} + 25y^{60} + \dots + 1370y - 1)$
c_3	$(y^{28} + 30y^{27} + \dots + 57969y + 9801)$ $\cdot (y^{61} + 121y^{60} + \dots + 5985624y - 208849)$
c_4, c_{10}	$(y^{28} + 30y^{27} + \dots + 27y + 1)(y^{61} + 89y^{60} + \dots - 560482y - 175561)$
c_5	$(y^{28} + y^{27} + \dots - 25y + 1)(y^{61} - 16y^{60} + \dots - 1860166y - 241081)$
c_7, c_{11}	$(y^{28} - 14y^{27} + \dots + 15y + 1)$ $\cdot (y^{61} - 103y^{60} + \dots - 592149097680014y - 182080776300361)$
c_8	$(y^{28} - 8y^{27} + \dots + 15y + 1)$ $\cdot (y^{61} + 15y^{60} + \dots - 71386126y - 15960025)$
c_9	$(y^{28} - 21y^{27} + \dots + 10y + 1)$ $\cdot (y^{61} - 50y^{60} + \dots + 15117817107y - 1202771761)$
c_{12}	$(y^{28} + y^{27} + \dots + 5y + 1)(y^{61} - 8y^{60} + \dots + 11324y - 361)$