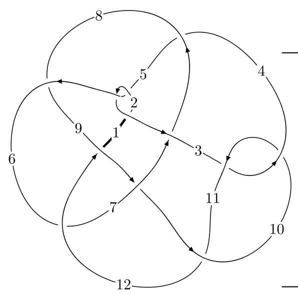
$12n_{0405}$ ($K12n_{0405}$)



A knot diagram[1]

Linearized knot diagam

$$\to\downarrow\to\downarrow\to\downarrow\to\downarrow\to\downarrow\to\uparrow\to\downarrow\to\downarrow\to\uparrow\to\downarrow\to\uparrow\to\downarrow\to$$

3 6 11 8 2 12 3 6 7 4 10 9

Solving Sequence

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

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

$$I_1^u = \langle -5.04740 \times 10^{30} u^{55} - 2.66361 \times 10^{30} u^{54} + \cdots + 5.37736 \times 10^{30} b - 1.62190 \times 10^{31},$$
$$- 1.29311 \times 10^{31} u^{55} - 2.08861 \times 10^{29} u^{54} + \cdots + 1.07547 \times 10^{31} a + 7.57948 \times 10^{31},\ u^{56} + u^{55} + \cdots + 11u -$$
$$I_2^u = \langle -u^{18} - 5u^{16} + \cdots + b - 1,\ -39u^{19} - 13u^{18} + \cdots + 46a - 113,\ u^{20} + 5u^{18} + \cdots + 3u + 1\rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 76 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.
$\boldsymbol{I_1^u = \langle -5.05\times10^{30}u^{55} - 2.66\times10^{30}u^{54} + \cdots + 5.38\times10^{30}b - 1.62\times10^{31},\ -1.29\times10^{31}u^{55} - 2.09\times10^{29}u^{54} + \cdots + 1.08\times10^{31}a + 7.58\times10^{31},\ u^{56} + u^{55} + \cdots + 11u + 1\rangle}$

(i) Arc colorings

$$a_3 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_4 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}1.20236u^{55} + 0.0194204u^{54} + \cdots + 2.12491u - 7.04759\\0.938638u^{55} + 0.495339u^{54} + \cdots + 12.7233u + 3.01616\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.263723u^{55} - 0.475918u^{54} + \cdots - 10.5984u - 10.0637\\0.938638u^{55} + 0.495339u^{54} + \cdots + 12.7233u + 3.01616\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-1.47729u^{55} - 2.00842u^{54} + \cdots - 77.8992u - 24.8854\\1.30201u^{55} + 0.374284u^{54} + \cdots + 17.0385u + 5.14052\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}u\\u^3 + u\end{pmatrix}$$
$$a_{12} = \begin{pmatrix}u^3\\u^5 + u^3 + u\end{pmatrix}$$
$$a_6 = \begin{pmatrix}1.26914u^{55} - 0.0878330u^{54} + \cdots + 2.68555u - 7.01937\\0.932246u^{55} + 0.339280u^{54} + \cdots + 7.82652u + 2.41420\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.0113393u^{55} + 0.701676u^{54} + \cdots + 33.7128u + 17.2063\\-0.985020u^{55} + 0.0619797u^{54} + \cdots - 14.0951u - 4.29081\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-0.996359u^{55} + 0.763656u^{54} + \cdots + 19.6177u + 12.9155\\-0.985020u^{55} + 0.0619797u^{54} + \cdots - 14.0951u - 4.29081\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.673812u^{55} + 1.74584u^{54} + \cdots + 30.9969u + 11.4293\\-1.53887u^{55} - 0.462506u^{54} + \cdots - 10.8493u - 3.21916\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -3.20118u^{55} - 1.25466u^{54} + \cdots - 55.5550u - 11.0853$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{56} + 81u^{55} + \cdots - 82u + 1$
c_2, c_5	$u^{56} + 3u^{55} + \cdots + 20u - 1$
c_3, c_{10}	$u^{56} + u^{55} + \cdots + 11u + 1$
c_4	$u^{56} - u^{55} + \cdots - 5248u - 1021$
c_6	$u^{56} - 2u^{55} + \cdots + 74u + 127$
c_7	$u^{56} - u^{55} + \cdots + 211173u - 7921$
c_8	$u^{56} + 10u^{55} + \cdots + 155830u + 215404$
c_9	$u^{56} + 16u^{55} + \cdots + 815u + 53$
c_{11}	$u^{56} - 23u^{55} + \cdots + 43u + 1$
c_{12}	$u^{56} - 9u^{55} + \cdots - 735411u - 85511$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{56} - 201y^{55} + \cdots - 18994y + 1$
c_2, c_5	$y^{56} - 81y^{55} + \cdots + 82y + 1$
c_3, c_{10}	$y^{56} + 23y^{55} + \cdots - 43y + 1$
c_4	$y^{56} - 97y^{55} + \cdots + 134121594y + 1042441$
c_6	$y^{56} + 14y^{55} + \cdots + 197216y + 16129$
c_7	$y^{56} - 59y^{55} + \cdots + 2248587717y + 62742241$
c_8	$y^{56} - 106y^{55} + \cdots - 2285891007612y + 46398883216$
c_9	$y^{56} + 12y^{55} + \cdots - 7449y + 2809$
c_{11}	$y^{56} + 27y^{55} + \cdots - 3871y + 1$
c_{12}	$y^{56} - 45y^{55} + \cdots - 1207444021181y + 7312131121$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.692976 + 0.741456I$ $a = 0.83415 - 2.68568I$ $b = 2.82225 - 1.87057I$	$-13.01880 - 0.11658I$	$-13.39749 + 0.26224I$
$u = 0.692976 - 0.741456I$ $a = 0.83415 + 2.68568I$ $b = 2.82225 + 1.87057I$	$-13.01880 + 0.11658I$	$-13.39749 - 0.26224I$
$u = -0.888534 + 0.493154I$ $a = 0.787487 + 0.456037I$ $b = 0.828874 + 0.814475I$	$-4.23499 - 0.34965I$	$-13.31370 + 0.I$
$u = -0.888534 - 0.493154I$ $a = 0.787487 - 0.456037I$ $b = 0.828874 - 0.814475I$	$-4.23499 + 0.34965I$	$-13.31370 + 0.I$
$u = -0.633685 + 0.804537I$ $a = 2.26499 + 1.02925I$ $b = 1.64637 - 1.29628I$	$-2.67621 + 0.18944I$	$-11.22703 - 1.60949I$
$u = -0.633685 - 0.804537I$ $a = 2.26499 - 1.02925I$ $b = 1.64637 + 1.29628I$	$-2.67621 - 0.18944I$	$-11.22703 + 1.60949I$
$u = -0.633438 + 0.738930I$ $a = 1.67728 - 0.91484I$ $b = 1.368790 + 0.135930I$	$-12.20520 + 0.71501I$	$-16.2418 + 1.0323I$
$u = -0.633438 - 0.738930I$ $a = 1.67728 + 0.91484I$ $b = 1.368790 - 0.135930I$	$-12.20520 - 0.71501I$	$-16.2418 - 1.0323I$
$u = 0.858766 + 0.568486I$ $a = 1.39718 - 0.43816I$ $b = 1.51683 + 0.16349I$	$-4.83444 + 3.81788I$	$-12.17523 - 2.36589I$
$u = 0.858766 - 0.568486I$ $a = 1.39718 + 0.43816I$ $b = 1.51683 - 0.16349I$	$-4.83444 - 3.81788I$	$-12.17523 + 2.36589I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.636578 + 0.817575I$ $a = -0.793907 + 0.325846I$ $b = -0.824038 + 0.535982I$	$-3.51130 - 0.72418I$	$-12.99804 - 0.44886I$
$u = 0.636578 - 0.817575I$ $a = -0.793907 - 0.325846I$ $b = -0.824038 - 0.535982I$	$-3.51130 + 0.72418I$	$-12.99804 + 0.44886I$
$u = 0.104993 + 1.060980I$ $a = 0.053924 + 0.614830I$ $b = 0.345359 - 0.952663I$	$3.62265 + 0.91650I$	$-60.912924 + 0.10I$
$u = 0.104993 - 1.060980I$ $a = 0.053924 - 0.614830I$ $b = 0.345359 + 0.952663I$	$3.62265 - 0.91650I$	$-60.912924 + 0.10I$
$u = -0.047680 + 0.929101I$ $a = 2.35142 - 0.07585I$ $b = -0.959476 + 0.938322I$	$-8.23805 + 0.54981I$	$-5.62601 + 0.13195I$
$u = -0.047680 - 0.929101I$ $a = 2.35142 + 0.07585I$ $b = -0.959476 - 0.938322I$	$-8.23805 - 0.54981I$	$-5.62601 - 0.13195I$
$u = 0.639057 + 0.870621I$ $a = 1.25596 - 0.86121I$ $b = 0.544969 + 0.721077I$	$-3.35127 - 4.26074I$	$-12.1347 + 7.9623I$
$u = 0.639057 - 0.870621I$ $a = 1.25596 + 0.86121I$ $b = 0.544969 - 0.721077I$	$-3.35127 + 4.26074I$	$-12.1347 - 7.9623I$
$u = -0.622311 + 0.676205I$ $a = -1.52391 + 0.07731I$ $b = -0.701853 + 0.906118I$	$-1.41377 + 1.41882I$	$-7.66827 - 2.37637I$
$u = -0.622311 - 0.676205I$ $a = -1.52391 - 0.07731I$ $b = -0.701853 - 0.906118I$	$-1.41377 - 1.41882I$	$-7.66827 + 2.37637I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.002470 + 0.434054I$ $a = -0.995062 - 0.161033I$ $b = -1.65678 - 0.10063I$	$-14.5702 - 3.5038I$	$-12.90961 + 3.29634I$
$u = 1.002470 - 0.434054I$ $a = -0.995062 + 0.161033I$ $b = -1.65678 + 0.10063I$	$-14.5702 + 3.5038I$	$-12.90961 - 3.29634I$
$u = -0.934670 + 0.567956I$ $a = -1.31747 - 1.19240I$ $b = -1.95969 - 1.15142I$	$-15.5375 - 8.7539I$	$-11.13073 + 3.10208I$
$u = -0.934670 - 0.567956I$ $a = -1.31747 + 1.19240I$ $b = -1.95969 + 1.15142I$	$-15.5375 + 8.7539I$	$-11.13073 - 3.10208I$
$u = -0.631753 + 0.901368I$ $a = -1.02898 - 1.61492I$ $b = -2.09741 - 0.75187I$	$-2.37070 + 4.76407I$	$-10.20100 - 5.68692I$
$u = -0.631753 - 0.901368I$ $a = -1.02898 + 1.61492I$ $b = -2.09741 + 0.75187I$	$-2.37070 - 4.76407I$	$-10.20100 + 5.68692I$
$u = -0.204920 + 1.113530I$ $a = 0.265324 + 0.432938I$ $b = 0.0303195 + 0.0315283I$	$2.10184 + 2.44163I$	$-6.00000 - 6.66179I$
$u = -0.204920 - 1.113530I$ $a = 0.265324 - 0.432938I$ $b = 0.0303195 - 0.0315283I$	$2.10184 - 2.44163I$	$-6.00000 + 6.66179I$
$u = -0.637975 + 0.945501I$ $a = -0.49971 - 2.41919I$ $b = -1.051990 + 0.178832I$	$-11.56320 + 4.27962I$	0
$u = -0.637975 - 0.945501I$ $a = -0.49971 + 2.41919I$ $b = -1.051990 - 0.178832I$	$-11.56320 - 4.27962I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.628401 + 0.578258I$ $a = -1.49132 + 0.91673I$ $b = -0.663752 + 0.368778I$	$-0.88901 + 2.15046I$	$-6.68954 - 4.21266I$
$u = 0.628401 - 0.578258I$ $a = -1.49132 - 0.91673I$ $b = -0.663752 - 0.368778I$	$-0.88901 - 2.15046I$	$-6.68954 + 4.21266I$
$u = -0.617638 + 0.982030I$ $a = 0.453503 + 0.970711I$ $b = 1.147700 + 0.399179I$	$-0.48219 + 3.48780I$	0
$u = -0.617638 - 0.982030I$ $a = 0.453503 - 0.970711I$ $b = 1.147700 - 0.399179I$	$-0.48219 - 3.48780I$	0
$u = 0.674791 + 0.947519I$ $a = -2.87088 + 0.86323I$ $b = -2.20281 - 2.50210I$	$-12.39390 - 5.16219I$	0
$u = 0.674791 - 0.947519I$ $a = -2.87088 - 0.86323I$ $b = -2.20281 + 2.50210I$	$-12.39390 + 5.16219I$	0
$u = -0.205795 + 0.791172I$ $a = -0.622285 - 0.611724I$ $b = -1.082330 - 0.398478I$	$0.118397 - 0.860000I$	$-3.74291 + 1.06399I$
$u = -0.205795 - 0.791172I$ $a = -0.622285 + 0.611724I$ $b = -1.082330 + 0.398478I$	$0.118397 + 0.860000I$	$-3.74291 - 1.06399I$
$u = 0.622297 + 1.014000I$ $a = 1.75434 - 0.58914I$ $b = 0.968744 + 0.647144I$	$0.37205 - 7.12007I$	0
$u = 0.622297 - 1.014000I$ $a = 1.75434 + 0.58914I$ $b = 0.968744 - 0.647144I$	$0.37205 + 7.12007I$	0

Solutions to I^u_1	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=\ \ 0.693949+1.070290I$ $a=-0.98029+1.20357I$ $b=-1.74189-0.24768I$	$-3.32079-9.58196I$	0
$u=\ \ 0.693949-1.070290I$ $a=-0.98029-1.20357I$ $b=-1.74189+0.24768I$	$-3.32079+9.58196I$	0
$u=-0.137699+1.273350I$ $a=\ \ 0.353439+0.379773I$ $b=-0.460194-0.278269I$	$2.02092+2.34731I$	0
$u=-0.137699-1.273350I$ $a=\ \ 0.353439-0.379773I$ $b=-0.460194+0.278269I$	$2.02092-2.34731I$	0
$u=\ \ 0.105350+1.287810I$ $a=-0.735406-0.340219I$ $b=\ \ 1.31301+0.75117I$	$-8.24037-6.79326I$	0
$u=\ \ 0.105350-1.287810I$ $a=-0.735406+0.340219I$ $b=\ \ 1.31301-0.75117I$	$-8.24037+6.79326I$	0
$u=-0.684933+1.102170I$ $a=-1.35653-0.57109I$ $b=-0.746484+1.007420I$	$-2.41411+6.13994I$	0
$u=-0.684933-1.102170I$ $a=-1.35653+0.57109I$ $b=-0.746484-1.007420I$	$-2.41411-6.13994I$	0
$u=-0.720000+1.106020I$ $a=\ \ 1.91793+1.16363I$ $b=\ \ 1.89543-1.46698I$	$-13.8786+14.8239I$	0
$u=-0.720000-1.106020I$ $a=\ \ 1.91793-1.16363I$ $b=\ \ 1.89543+1.46698I$	$-13.8786-14.8239I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.705581 + 1.210660I$ $a = 0.274806 - 1.197140I$ $b = 1.40944 + 0.27613I$	$-12.19060 - 2.71913I$	0
$u = 0.705581 - 1.210660I$ $a = 0.274806 + 1.197140I$ $b = 1.40944 - 0.27613I$	$-12.19060 + 2.71913I$	0
$u = 0.001183 + 0.423530I$ $a = -2.64102 + 1.15828I$ $b = 0.087714 + 0.372288I$	$-0.61644 + 1.72204I$	$-1.75056 - 4.93921I$
$u = 0.001183 - 0.423530I$ $a = -2.64102 - 1.15828I$ $b = 0.087714 - 0.372288I$	$-0.61644 - 1.72204I$	$-1.75056 + 4.93921I$
$u = -0.403232$ $a = -0.866892$ $b = -0.486409$	-0.901459	-10.8820
$u = -0.127485$ $a = -7.70303$ $b = 1.93220$	-11.0448	-6.10820

II. $\boldsymbol{I_2^u = \langle -u^{18} - 5u^{16} + \cdots + b - 1,\ -39u^{19} - 13u^{18} + \cdots + 46a - 113,\ u^{20} + 5u^{18} + \cdots + 3u + 1\rangle}$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.847826u^{19} + 0.282609u^{18} + \cdots + 4.73913u + 2.45652 \\ u^{18} + 5u^{16} + \cdots + 2u + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.847826u^{19} - 0.717391u^{18} + \cdots + 2.73913u + 1.45652 \\ u^{18} + 5u^{16} + \cdots + 2u + 1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 1.43478u^{19} + 0.478261u^{18} + \cdots + 4.17391u + 2.69565 \\ -0.543478u^{19} - 0.847826u^{18} + \cdots - 3.21739u - 0.369565 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u \\ u^3 + u \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} u^3 \\ u^5 + u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.956522u^{19} - 0.347826u^{18} + \cdots + 3.78261u + 2.13043 \\ 0.543478u^{19} + 0.847826u^{18} + \cdots + 2.21739u + 1.36957 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.152174u^{19} + 0.717391u^{18} + \cdots - 1.73913u - 0.456522 \\ 0.239130u^{19} + 0.413043u^{18} + \cdots + 0.695652u - 0.717391 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.391304u^{19} + 1.13043u^{18} + \cdots - 1.04348u - 1.17391 \\ 0.239130u^{19} + 0.413043u^{18} + \cdots + 0.695652u - 0.717391 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.847826u^{19} - 0.282609u^{18} + \cdots - 2.73913u - 1.45652 \\ -0.478261u^{19} - 0.826087u^{18} + \cdots - 2.39130u - 0.565217 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -\frac{83}{23}u^{19} + \frac{3}{23}u^{18} + \cdots - \frac{47}{23}u - \frac{303}{23}$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{20} - 22u^{19} + \cdots + 4u + 1$
c_2	$u^{20} + 2u^{19} + \cdots - 2u + 1$
c_3	$u^{20} + 5u^{18} + \cdots + 3u + 1$
c_4	$u^{20} + 2u^{19} + \cdots - 6u + 1$
c_5	$u^{20} - 2u^{19} + \cdots + 2u + 1$
c_6	$u^{20} - u^{19} + \cdots - 4u + 1$
c_7	$u^{20} - 6u^{18} + \cdots + 3u + 1$
c_8	$u^{20} + 17u^{19} + \cdots + 50u + 4$
c_9	$u^{20} - 3u^{19} + \cdots - u + 1$
c_{10}	$u^{20} + 5u^{18} + \cdots - 3u + 1$
c_{11}	$u^{20} - 10u^{19} + \cdots + u + 1$
c_{12}	$u^{20} - 4u^{19} + \cdots - u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{20} - 38y^{19} + \cdots + 52y + 1$
c_2, c_5	$y^{20} - 22y^{19} + \cdots + 4y + 1$
c_3, c_{10}	$y^{20} + 10y^{19} + \cdots - y + 1$
c_4	$y^{20} - 14y^{19} + \cdots + 16y + 1$
c_6	$y^{20} + y^{19} + \cdots - 6y + 1$
c_7	$y^{20} - 12y^{19} + \cdots - 13y + 1$
c_8	$y^{20} - 19y^{19} + \cdots + 116y + 16$
c_9	$y^{20} - 5y^{19} + \cdots - 3y + 1$
c_{11}	$y^{20} + 6y^{19} + \cdots - y + 1$
c_{12}	$y^{20} - 6y^{19} + \cdots + y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.772905 + 0.572344I$ $a = -0.933396 + 0.819549I$ $b = -0.558966 + 0.337682I$	$-2.53009 + 3.40174I$	$-9.63788 - 3.26819I$
$u = 0.772905 - 0.572344I$ $a = -0.933396 - 0.819549I$ $b = -0.558966 - 0.337682I$	$-2.53009 - 3.40174I$	$-9.63788 + 3.26819I$
$u = -0.682482 + 0.838468I$ $a = -0.785516 + 0.464945I$ $b = 0.280995 + 1.364070I$	$-2.91107 + 2.63432I$	$-11.73829 - 3.12601I$
$u = -0.682482 - 0.838468I$ $a = -0.785516 - 0.464945I$ $b = 0.280995 - 1.364070I$	$-2.91107 - 2.63432I$	$-11.73829 + 3.12601I$
$u = 0.543169 + 0.723200I$ $a = -1.49908 - 0.05473I$ $b = -1.86935 + 0.36653I$	$-11.45610 - 1.22236I$	$-7.56344 + 4.92814I$
$u = 0.543169 - 0.723200I$ $a = -1.49908 + 0.05473I$ $b = -1.86935 - 0.36653I$	$-11.45610 + 1.22236I$	$-7.56344 - 4.92814I$
$u = 0.027604 + 1.145960I$ $a = 0.355295 + 0.352119I$ $b = 0.039743 - 0.812092I$	$3.09023 + 2.06934I$	$-1.83260 - 4.32383I$
$u = 0.027604 - 1.145960I$ $a = 0.355295 - 0.352119I$ $b = 0.039743 + 0.812092I$	$3.09023 - 2.06934I$	$-1.83260 + 4.32383I$
$u = -0.526421 + 0.638893I$ $a = 2.08640 + 0.90796I$ $b = 1.255500 - 0.036319I$	$-1.43115 - 0.91050I$	$-9.59211 + 0.13114I$
$u = -0.526421 - 0.638893I$ $a = 2.08640 - 0.90796I$ $b = 1.255500 + 0.036319I$	$-1.43115 + 0.91050I$	$-9.59211 - 0.13114I$

Solutions to I_2^u		$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.576682 + 1.026770I$		
$a =$	$0.29109 - 1.79167I$	$-10.43120 - 3.28196I$	$-7.53074 + 2.63481I$
$b =$	$1.38675 + 0.49499I$		
$u =$	$0.576682 - 1.026770I$		
$a =$	$0.29109 + 1.79167I$	$-10.43120 + 3.28196I$	$-7.53074 - 2.63481I$
$b =$	$1.38675 - 0.49499I$		
$u =$	$-0.592965 + 1.023500I$		
$a =$	$-1.51004 - 1.14114I$	$-0.16184 + 5.53204I$	$-6.48670 - 5.34088I$
$b =$	$-1.28416 + 0.60245I$		
$u =$	$-0.592965 - 1.023500I$		
$a =$	$-1.51004 + 1.14114I$	$-0.16184 - 5.53204I$	$-6.48670 + 5.34088I$
$b =$	$-1.28416 - 0.60245I$		
$u =$	$0.665803 + 1.049490I$		
$a =$	$1.347780 - 0.248069I$	$-1.11207 - 8.86087I$	$-7.07964 + 7.75800I$
$b =$	$0.788455 + 0.595065I$		
$u =$	$0.665803 - 1.049490I$		
$a =$	$1.347780 + 0.248069I$	$-1.11207 + 8.86087I$	$-7.07964 - 7.75800I$
$b =$	$0.788455 - 0.595065I$		
$u =$	$-0.308242 + 1.258580I$		
$a =$	$0.342355 + 0.291715I$	$2.09543 + 1.81889I$	$-7.16687 + 6.15815I$
$b =$	$-0.437264 - 0.521691I$		
$u =$	$-0.308242 - 1.258580I$		
$a =$	$0.342355 - 0.291715I$	$2.09543 - 1.81889I$	$-7.16687 - 6.15815I$
$b =$	$-0.437264 + 0.521691I$		
$u =$	$-0.476054 + 0.151252I$		
$a =$	$0.30510 + 1.45204I$	$-1.47105 + 1.58070I$	$-12.37174 - 3.24876I$
$b =$	$0.398299 - 0.057590I$		
$u =$	$-0.476054 - 0.151252I$		
$a =$	$0.30510 - 1.45204I$	$-1.47105 - 1.58070I$	$-12.37174 + 3.24876I$
$b =$	$0.398299 + 0.057590I$		

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{20} - 22u^{19} + \cdots + 4u + 1)(u^{56} + 81u^{55} + \cdots - 82u + 1)$
c_2	$(u^{20} + 2u^{19} + \cdots - 2u + 1)(u^{56} + 3u^{55} + \cdots + 20u - 1)$
c_3	$(u^{20} + 5u^{18} + \cdots + 3u + 1)(u^{56} + u^{55} + \cdots + 11u + 1)$
c_4	$(u^{20} + 2u^{19} + \cdots - 6u + 1)(u^{56} - u^{55} + \cdots - 5248u - 1021)$
c_5	$(u^{20} - 2u^{19} + \cdots + 2u + 1)(u^{56} + 3u^{55} + \cdots + 20u - 1)$
c_6	$(u^{20} - u^{19} + \cdots - 4u + 1)(u^{56} - 2u^{55} + \cdots + 74u + 127)$
c_7	$(u^{20} - 6u^{18} + \cdots + 3u + 1)(u^{56} - u^{55} + \cdots + 211173u - 7921)$
c_8	$(u^{20} + 17u^{19} + \cdots + 50u + 4)(u^{56} + 10u^{55} + \cdots + 155830u + 215404)$
c_9	$(u^{20} - 3u^{19} + \cdots - u + 1)(u^{56} + 16u^{55} + \cdots + 815u + 53)$
c_{10}	$(u^{20} + 5u^{18} + \cdots - 3u + 1)(u^{56} + u^{55} + \cdots + 11u + 1)$
c_{11}	$(u^{20} - 10u^{19} + \cdots + u + 1)(u^{56} - 23u^{55} + \cdots + 43u + 1)$
c_{12}	$(u^{20} - 4u^{19} + \cdots - u + 1)(u^{56} - 9u^{55} + \cdots - 735411u - 85511)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{20} - 38y^{19} + \cdots + 52y + 1)(y^{56} - 201y^{55} + \cdots - 18994y + 1)$
c_2, c_5	$(y^{20} - 22y^{19} + \cdots + 4y + 1)(y^{56} - 81y^{55} + \cdots + 82y + 1)$
c_3, c_{10}	$(y^{20} + 10y^{19} + \cdots - y + 1)(y^{56} + 23y^{55} + \cdots - 43y + 1)$
c_4	$(y^{20} - 14y^{19} + \cdots + 16y + 1)$ $\cdot (y^{56} - 97y^{55} + \cdots + 134121594y + 1042441)$
c_6	$(y^{20} + y^{19} + \cdots - 6y + 1)(y^{56} + 14y^{55} + \cdots + 197216y + 16129)$
c_7	$(y^{20} - 12y^{19} + \cdots - 13y + 1)$ $\cdot (y^{56} - 59y^{55} + \cdots + 2248587717y + 62742241)$
c_8	$(y^{20} - 19y^{19} + \cdots + 116y + 16)$ $\cdot (y^{56} - 106y^{55} + \cdots - 2285891007612y + 46398883216)$
c_9	$(y^{20} - 5y^{19} + \cdots - 3y + 1)(y^{56} + 12y^{55} + \cdots - 7449y + 2809)$
c_{11}	$(y^{20} + 6y^{19} + \cdots - y + 1)(y^{56} + 27y^{55} + \cdots - 3871y + 1)$
c_{12}	$(y^{20} - 6y^{19} + \cdots + y + 1)$ $\cdot (y^{56} - 45y^{55} + \cdots - 1207444021181y + 7312131121)$