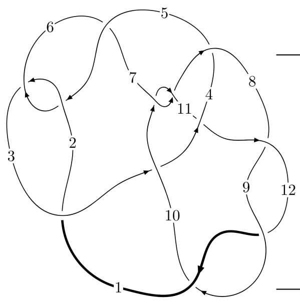
$12a_{0428}$ ($K12a_{0428}$)



A knot diagram[1]

Linearized knot diagam

$\rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \uparrow \rightarrow \downarrow \rightarrow \uparrow \rightarrow \uparrow \rightarrow$

3 6 10 8 2 5 11 12 1 7 4 9

Solving Sequence

$9,12 \xrightarrow[c_{12}]{} 1 \xrightarrow[c_{9}]{} 4,10 \xrightarrow[c_{3}]{} 3 \xrightarrow[c_{1}]{} 2 \xrightarrow[c_{8}]{} 8 \xrightarrow[c_{4}]{} 5 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_{7}]{} 7 \xrightarrow[c_{6}]{} 6 \twoheadrightarrow c_2, c_5, c_{10}$

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

$$
\begin{aligned}
I_1^u = \langle & 2.80676 \times 10^{126} u^{84} - 1.58226 \times 10^{127} u^{83} + \cdots + 6.30962 \times 10^{126} b - 8.39340 \times 10^{126}, \\
& - 8.84774 \times 10^{126} u^{84} + 5.87857 \times 10^{127} u^{83} + \cdots + 6.30962 \times 10^{126} a + 7.56669 \times 10^{127}, \\
& u^{85} - 7u^{84} + \cdots - 6u + 2 \rangle \\
I_2^u = \langle & b + 1,\ 2a + u - 4,\ u^2 - 2 \rangle \\
\\
I_1^v = \langle & a,\ b - 1,\ v - 1 \rangle
\end{aligned}
$$

* 3 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 88 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. $\boldsymbol{I_1^u = \langle 2.81 \times 10^{126} u^{84} - 1.58 \times 10^{127} u^{83} + \cdots + 6.31 \times 10^{126} b - 8.39 \times 10^{126},\ -8.85 \times 10^{126} u^{84} + 5.88 \times 10^{127} u^{83} + \cdots + 6.31 \times 10^{126} a + 7.57 \times 10^{127},\ u^{85} - 7u^{84} + \cdots - 6u + 2\rangle}$

(i) Arc colorings

$$a_9 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$
$$a_{12} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} 1.40226u^{84} - 9.31684u^{83} + \cdots - 23.5188u - 11.9923 \\ -0.444839u^{84} + 2.50770u^{83} + \cdots - 0.499951u + 1.33025 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1.47259u^{84} - 9.46618u^{83} + \cdots - 22.8706u - 13.0462 \\ -0.418554u^{84} + 2.03469u^{83} + \cdots - 1.76897u + 0.962317 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} -1.84257u^{84} + 11.7840u^{83} + \cdots + 18.6397u + 10.0949 \\ 1.51198u^{84} - 8.84490u^{83} + \cdots + 3.89018u - 2.11365 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -u \\ u \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1.67889u^{84} - 10.4912u^{83} + \cdots - 20.9610u - 12.2067 \\ -0.721468u^{84} + 3.68203u^{83} + \cdots - 3.05782u + 1.54459 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} 0.138261u^{84} - 1.44715u^{83} + \cdots - 8.35732u - 4.42866 \\ 0.360457u^{84} - 2.01792u^{83} + \cdots + 1.41000u - 0.981112 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -0.138261u^{84} + 1.44715u^{83} + \cdots + 8.35732u + 4.42866 \\ -0.519401u^{84} + 2.66327u^{83} + \cdots - 1.74245u - 0.0224697 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1.22347u^{84} - 7.56601u^{83} + \cdots - 9.48559u - 3.57665 \\ -1.38509u^{84} + 7.99231u^{83} + \cdots - 3.90685u + 1.41003 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes $= -4.04066u^{84} + 28.4088u^{83} + \cdots + 78.3664u + 30.4352$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_6	$u^{85} + 26u^{84} + \cdots + 138u + 1$
c_2, c_5	$u^{85} + 4u^{84} + \cdots - 10u + 1$
c_3	$u^{85} - 30u^{84} + \cdots + 3982062u + 182711$
c_4	$u^{85} + 24u^{84} + \cdots + 38u + 349$
c_7, c_{10}	$u^{85} + 2u^{84} + \cdots + 22u + 1$
c_8, c_9, c_{12}	$u^{85} - 7u^{84} + \cdots - 6u + 2$
c_{11}	$u^{85} - 4u^{84} + \cdots - 10u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_6	$y^{85} + 70y^{84} + \cdots + 18106y - 1$
c_2, c_5	$y^{85} - 26y^{84} + \cdots + 138y - 1$
c_3	$y^{85} - 266y^{84} + \cdots + 5409686724738y - 33383309521$
c_4	$y^{85} - 258y^{84} + \cdots - 3360822y - 121801$
c_7, c_{10}	$y^{85} - 50y^{84} + \cdots + 210y - 1$
c_8, c_9, c_{12}	$y^{85} - 91y^{84} + \cdots + 84y - 4$
c_{11}	$y^{85} - 10y^{84} + \cdots + 82y - 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.350398 + 0.954037I$ $a = -0.219916 + 0.109779I$ $b = -0.615170 - 0.648027I$	$1.23620 + 1.62017I$	0
$u = -0.350398 - 0.954037I$ $a = -0.219916 - 0.109779I$ $b = -0.615170 + 0.648027I$	$1.23620 - 1.62017I$	0
$u = -0.689400 + 0.747068I$ $a = -0.820189 - 0.472975I$ $b = 0.887204 - 0.981521I$	$2.30710 - 7.08904I$	0
$u = -0.689400 - 0.747068I$ $a = -0.820189 + 0.472975I$ $b = 0.887204 + 0.981521I$	$2.30710 + 7.08904I$	0
$u = -0.663371 + 0.802333I$ $a = 0.809381 + 0.448944I$ $b = -0.903277 + 0.986202I$	$1.47284 - 13.12350I$	0
$u = -0.663371 - 0.802333I$ $a = 0.809381 - 0.448944I$ $b = -0.903277 - 0.986202I$	$1.47284 + 13.12350I$	0
$u = -0.443639 + 0.971475I$ $a = 0.188178 - 0.202759I$ $b = 0.625699 + 0.679357I$	$0.74636 + 7.39297I$	0
$u = -0.443639 - 0.971475I$ $a = 0.188178 + 0.202759I$ $b = 0.625699 - 0.679357I$	$0.74636 - 7.39297I$	0
$u = -0.582158 + 0.684632I$ $a = 0.424934 - 0.552027I$ $b = 0.520307 + 0.764862I$	$-4.75882 + 3.00452I$	0
$u = -0.582158 - 0.684632I$ $a = 0.424934 + 0.552027I$ $b = 0.520307 - 0.764862I$	$-4.75882 - 3.00452I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.483276 + 0.686746I$ $a = 0.721089 + 0.479217I$ $b = -0.894296 + 1.050870I$	$-5.01547 - 7.61885I$	0
$u = -0.483276 - 0.686746I$ $a = 0.721089 - 0.479217I$ $b = -0.894296 - 1.050870I$	$-5.01547 + 7.61885I$	0
$u = -0.780126 + 0.247893I$ $a = 0.24627 - 1.42990I$ $b = 0.260947 + 0.994313I$	$-3.10853 - 1.92390I$	0
$u = -0.780126 - 0.247893I$ $a = 0.24627 + 1.42990I$ $b = 0.260947 - 0.994313I$	$-3.10853 + 1.92390I$	0
$u = 0.352197 + 0.734345I$ $a = 0.228751 - 0.454302I$ $b = -0.622349 - 0.427633I$	$-0.61148 + 3.02035I$	0
$u = 0.352197 - 0.734345I$ $a = 0.228751 + 0.454302I$ $b = -0.622349 + 0.427633I$	$-0.61148 - 3.02035I$	0
$u = 0.718711 + 0.953380I$ $a = 0.334403 - 0.245488I$ $b = -0.690642 - 0.403366I$	$5.16840 + 6.32915I$	0
$u = 0.718711 - 0.953380I$ $a = 0.334403 + 0.245488I$ $b = -0.690642 + 0.403366I$	$5.16840 - 6.32915I$	0
$u = 0.797687 + 0.893769I$ $a = -0.365741 + 0.245017I$ $b = 0.687642 + 0.390239I$	$5.44394 + 0.44289I$	0
$u = 0.797687 - 0.893769I$ $a = -0.365741 - 0.245017I$ $b = 0.687642 - 0.390239I$	$5.44394 - 0.44289I$	0

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.523520+0.498463I$ $a=-0.694604-0.589082I$ $b=\ \ 0.805309-1.079360I$	$-1.28750-4.47163I$	$0.+7.27748I$
$u=-0.523520-0.498463I$ $a=-0.694604+0.589082I$ $b=\ \ 0.805309+1.079360I$	$-1.28750+4.47163I$	$0.-7.27748I$
$u=\ \ 1.312140+0.034317I$ $a=-0.288123-0.083227I$ $b=\ \ 0.282890-0.765202I$	$2.85614+1.44672I$	0
$u=\ \ 1.312140-0.034317I$ $a=-0.288123+0.083227I$ $b=\ \ 0.282890+0.765202I$	$2.85614-1.44672I$	0
$u=\ \ 0.633148+0.261587I$ $a=-0.599636-0.162415I$ $b=\ \ 1.010410-0.616700I$	$3.19350+0.56226I$	$3.06377-2.90425I$
$u=\ \ 0.633148-0.261587I$ $a=-0.599636+0.162415I$ $b=\ \ 1.010410+0.616700I$	$3.19350-0.56226I$	$3.06377+2.90425I$
$u=\ \ 0.540521+0.360690I$ $a=\ \ 0.590908+0.173669I$ $b=-1.095800+0.703881I$	$2.25501+6.33839I$	$0.16573-8.82951I$
$u=\ \ 0.540521-0.360690I$ $a=\ \ 0.590908-0.173669I$ $b=-1.095800-0.703881I$	$2.25501-6.33839I$	$0.16573+8.82951I$
$u=\ \ 0.550804+0.330376I$ $a=-0.605955+0.401645I$ $b=\ \ 0.664924+0.336752I$	$1.141080+0.674467I$	$6.05979-2.03685I$
$u=\ \ 0.550804-0.330376I$ $a=-0.605955-0.401645I$ $b=\ \ 0.664924-0.336752I$	$1.141080-0.674467I$	$6.05979+2.03685I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.373900 + 0.312502I$ $a = -0.546242 + 0.208542I$ $b = 0.540012 + 0.290386I$	$2.32626 + 1.44371I$	0
$u = 1.373900 - 0.312502I$ $a = -0.546242 - 0.208542I$ $b = 0.540012 - 0.290386I$	$2.32626 - 1.44371I$	0
$u = -1.40914$ $a = -16.7791$ $b = 0.101896$	2.16646	0
$u = -0.575916 + 0.039342I$ $a = -0.56776 + 1.38481I$ $b = 0.314595 + 0.853851I$	$4.04443 + 2.89490I$	$2.62420 - 5.69184I$
$u = -0.575916 - 0.039342I$ $a = -0.56776 - 1.38481I$ $b = 0.314595 - 0.853851I$	$4.04443 - 2.89490I$	$2.62420 + 5.69184I$
$u = -1.42933$ $a = -2.01148$ $b = 1.27671$	3.31731	0
$u = -1.43615 + 0.00633I$ $a = -1.07681 + 8.24758I$ $b = 0.026127 + 0.202391I$	$6.35829 - 2.84127I$	0
$u = -1.43615 - 0.00633I$ $a = -1.07681 - 8.24758I$ $b = 0.026127 - 0.202391I$	$6.35829 + 2.84127I$	0
$u = -0.302575 + 0.455380I$ $a = -1.49220 + 0.23122I$ $b = -0.383548 - 0.612585I$	$-1.80646 + 1.16535I$	$-2.20309 + 0.49603I$
$u = -0.302575 - 0.455380I$ $a = -1.49220 - 0.23122I$ $b = -0.383548 + 0.612585I$	$-1.80646 - 1.16535I$	$-2.20309 - 0.49603I$

Solutions to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.46581$ $a = 1.07213$ $b = -0.291522$	3.38907	0
$u = 1.47026 + 0.09843I$ $a = -1.90184 - 1.00109I$ $b = 1.48075 + 1.64599I$	$1.40995 + 2.41389I$	0
$u = 1.47026 - 0.09843I$ $a = -1.90184 + 1.00109I$ $b = 1.48075 - 1.64599I$	$1.40995 - 2.41389I$	0
$u = -0.301501 + 0.430647I$ $a = 0.540764 + 0.519219I$ $b = -0.87964 + 1.24285I$	$-4.44895 - 0.68347I$	$-8.48630 + 5.94537I$
$u = -0.301501 - 0.430647I$ $a = 0.540764 - 0.519219I$ $b = -0.87964 - 1.24285I$	$-4.44895 + 0.68347I$	$-8.48630 - 5.94537I$
$u = -1.47467$ $a = -2.37463$ $b = 2.10239$	3.16776	0
$u = -0.498452 + 0.140002I$ $a = 0.54620 - 1.67577I$ $b = -0.250598 - 0.735061I$	$3.84985 - 3.08699I$	$1.200909 + 0.416894I$
$u = -0.498452 - 0.140002I$ $a = 0.54620 + 1.67577I$ $b = -0.250598 + 0.735061I$	$3.84985 + 3.08699I$	$1.200909 - 0.416894I$
$u = -1.46964 + 0.20672I$ $a = -1.54329 - 0.13102I$ $b = 1.099320 - 0.617535I$	$5.32596 - 6.27686I$	0
$u = -1.46964 - 0.20672I$ $a = -1.54329 + 0.13102I$ $b = 1.099320 + 0.617535I$	$5.32596 + 6.27686I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.50742 + 0.21678I$ $a = -1.88143 - 0.35406I$ $b = 1.30541 + 1.20213I$	$1.48847 + 10.87230I$	0
$u = 1.50742 - 0.21678I$ $a = -1.88143 + 0.35406I$ $b = 1.30541 - 1.20213I$	$1.48847 - 10.87230I$	0
$u = 1.52560 + 0.04894I$ $a = -0.732565 + 0.568243I$ $b = 0.60909 - 1.42456I$	$10.66790 + 3.82825I$	0
$u = 1.52560 - 0.04894I$ $a = -0.732565 - 0.568243I$ $b = 0.60909 + 1.42456I$	$10.66790 - 3.82825I$	0
$u = -1.52356 + 0.11089I$ $a = 1.64270 - 0.07825I$ $b = -1.262990 + 0.607994I$	$7.99831 - 2.36928I$	0
$u = -1.52356 - 0.11089I$ $a = 1.64270 + 0.07825I$ $b = -1.262990 - 0.607994I$	$7.99831 + 2.36928I$	0
$u = -1.53057 + 0.09366I$ $a = -1.58412 - 0.90265I$ $b = 1.53360 + 1.16611I$	$9.16879 - 7.92620I$	0
$u = -1.53057 - 0.09366I$ $a = -1.58412 + 0.90265I$ $b = 1.53360 - 1.16611I$	$9.16879 + 7.92620I$	0
$u = 1.52747 + 0.14748I$ $a = 1.72231 + 0.56923I$ $b = -1.26106 - 1.37468I$	$5.52175 + 6.80206I$	0
$u = 1.52747 - 0.14748I$ $a = 1.72231 - 0.56923I$ $b = -1.26106 + 1.37468I$	$5.52175 - 6.80206I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.54188 + 0.01197I$ $a = 0.905976 - 0.683222I$ $b = -0.73000 + 1.51724I$	$11.17630 - 2.69311I$	0
$u = 1.54188 - 0.01197I$ $a = 0.905976 + 0.683222I$ $b = -0.73000 - 1.51724I$	$11.17630 + 2.69311I$	0
$u = 0.217769 + 0.395625I$ $a = -2.31457 + 3.78349I$ $b = 0.549464 + 0.358418I$	$1.33766 - 3.69180I$	$-2.91564 - 6.56746I$
$u = 0.217769 - 0.395625I$ $a = -2.31457 - 3.78349I$ $b = 0.549464 - 0.358418I$	$1.33766 + 3.69180I$	$-2.91564 + 6.56746I$
$u = 0.137119 + 0.429179I$ $a = 1.41458 - 3.63175I$ $b = -0.508025 - 0.397814I$	$1.61743 + 1.92054I$	$-4.53145 - 10.20212I$
$u = 0.137119 - 0.429179I$ $a = 1.41458 + 3.63175I$ $b = -0.508025 + 0.397814I$	$1.61743 - 1.92054I$	$-4.53145 + 10.20212I$
$u = -1.55025 + 0.05271I$ $a = 1.65971 + 0.68673I$ $b = -1.54955 - 0.98630I$	$10.50810 - 1.58318I$	0
$u = -1.55025 - 0.05271I$ $a = 1.65971 - 0.68673I$ $b = -1.54955 + 0.98630I$	$10.50810 + 1.58318I$	0
$u = 1.59322 + 0.24396I$ $a = 1.68399 + 0.21421I$ $b = -1.16060 - 1.17745I$	$9.8437 + 10.7875I$	0
$u = 1.59322 - 0.24396I$ $a = 1.68399 - 0.21421I$ $b = -1.16060 + 1.17745I$	$9.8437 - 10.7875I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.58993 + 0.26792I$ $a = -1.71012 - 0.16860I$ $b = 1.16281 + 1.14841I$	$8.8777 + 17.1027I$	0
$u = 1.58993 - 0.26792I$ $a = -1.71012 + 0.16860I$ $b = 1.16281 - 1.14841I$	$8.8777 - 17.1027I$	0
$u = 1.61589$ $a = 0.698589$ $b = -0.487127$	3.20256	0
$u = -1.61442 + 0.28932I$ $a = -1.330270 - 0.024937I$ $b = 1.115990 - 0.750430I$	$12.8099 - 10.8246I$	0
$u = -1.61442 - 0.28932I$ $a = -1.330270 + 0.024937I$ $b = 1.115990 + 0.750430I$	$12.8099 + 10.8246I$	0
$u = -1.62338 + 0.25478I$ $a = 1.350760 - 0.010554I$ $b = -1.136210 + 0.748740I$	$13.4106 - 4.5882I$	0
$u = -1.62338 - 0.25478I$ $a = 1.350760 + 0.010554I$ $b = -1.136210 - 0.748740I$	$13.4106 + 4.5882I$	0
$u = 0.324337$ $a = 0.519295$ $b = -1.59336$	-2.87826	11.9720
$u = -0.046813 + 0.268057I$ $a = 0.91813 - 2.01039I$ $b = -0.329123 - 0.384605I$	$-1.299660 - 0.323757I$	$-7.76191 + 0.15984I$
$u = -0.046813 - 0.268057I$ $a = 0.91813 + 2.01039I$ $b = -0.329123 + 0.384605I$	$-1.299660 + 0.323757I$	$-7.76191 - 0.15984I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.70664 + 0.39050I$ $a = -0.546221 + 0.106871I$ $b = \ \ 0.628527 + 0.166438I$	$7.66813 + 4.11619I$	0
$u = \ \ 1.70664 - 0.39050I$ $a = -0.546221 - 0.106871I$ $b = \ \ 0.628527 - 0.166438I$	$7.66813 - 4.11619I$	0
$u = \ \ 1.74211 + 0.33236I$ $a = \ \ 0.556958 - 0.093535I$ $b = -0.623304 - 0.141707I$	$7.76568 - 1.75662I$	0
$u = \ \ 1.74211 - 0.33236I$ $a = \ \ 0.556958 + 0.093535I$ $b = -0.623304 + 0.141707I$	$7.76568 + 1.75662I$	0
$u = \ \ 0.208276$ $a = -13.4536$ $b = \ \ 0.461304$	−3.01471	42.1890

II. $\boldsymbol{I_2^u = \langle b+1,\ 2a+u-4,\ u^2-2 \rangle}$

(i) Arc colorings

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

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

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

$$a_4 = \begin{pmatrix} -\frac{1}{2}u+2 \\ -1 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} \frac{1}{2}u \\ -u+1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} \frac{1}{2}u \\ -u+1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} \frac{1}{2}u-1 \\ 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -\frac{1}{2}u-1 \\ u+1 \end{pmatrix}$$

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -4$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_{10}	$(u-1)^2$
c_3	u^2-2u-1
c_4	u^2+2u-1
c_5, c_6, c_7 c_{11}	$(u+1)^2$
c_8, c_9, c_{12}	u^2-2

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_5 c_6, c_7, c_{10} c_{11}	$(y-1)^2$
c_3, c_4	$y^2 - 6y + 1$
c_8, c_9, c_{12}	$(y-2)^2$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.41421$ $a = 1.29289$ $b = -1.00000$	1.64493	−4.00000
$u = -1.41421$ $a = 2.70711$ $b = -1.00000$	1.64493	−4.00000

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

(i) Arc colorings

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

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

$$a_1 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

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

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

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

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

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

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

$$a_{11} = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

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

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

(ii) Obstruction class $= 1$

(iii) Cusp Shapes $= -12$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2, c_7 c_{11}	$u - 1$
c_3, c_4, c_5 c_6, c_{10}	$u + 1$
c_8, c_9, c_{12}	u

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_3 c_4, c_5, c_6 c_7, c_{10}, c_{11}	$y-1$
c_8, c_9, c_{12}	y

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^v		$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$v =$	1.00000		
$a =$	0	-3.28987	-12.0000
$b =$	1.00000		

IV. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^3)(u^{85}+26u^{84}+\cdots+138u+1)$
c_2	$((u-1)^3)(u^{85}+4u^{84}+\cdots-10u+1)$
c_3	$(u+1)(u^2-2u-1)(u^{85}-30u^{84}+\cdots+3982062u+182711)$
c_4	$(u+1)(u^2+2u-1)(u^{85}+24u^{84}+\cdots+38u+349)$
c_5	$((u+1)^3)(u^{85}+4u^{84}+\cdots-10u+1)$
c_6	$((u+1)^3)(u^{85}+26u^{84}+\cdots+138u+1)$
c_7	$(u-1)(u+1)^2(u^{85}+2u^{84}+\cdots+22u+1)$
c_8, c_9, c_{12}	$u(u^2-2)(u^{85}-7u^{84}+\cdots-6u+2)$
c_{10}	$((u-1)^2)(u+1)(u^{85}+2u^{84}+\cdots+22u+1)$
c_{11}	$(u-1)(u+1)^2(u^{85}-4u^{84}+\cdots-10u+1)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1, c_6	$((y-1)^3)(y^{85}+70y^{84}+\cdots+18106y-1)$
c_2, c_5	$((y-1)^3)(y^{85}-26y^{84}+\cdots+138y-1)$
c_3	$(y-1)(y^2-6y+1)$ $\cdot\,(y^{85}-266y^{84}+\cdots+5409686724738y-33383309521)$
c_4	$(y-1)(y^2-6y+1)(y^{85}-258y^{84}+\cdots-3360822y-121801)$
c_7, c_{10}	$((y-1)^3)(y^{85}-50y^{84}+\cdots+210y-1)$
c_8, c_9, c_{12}	$y(y-2)^2(y^{85}-91y^{84}+\cdots+84y-4)$
c_{11}	$((y-1)^3)(y^{85}-10y^{84}+\cdots+82y-1)$