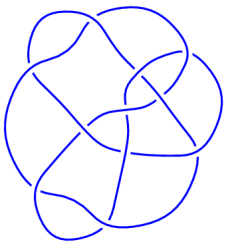
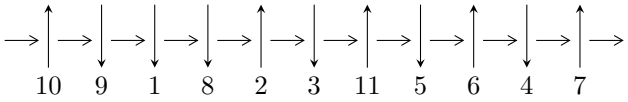
$11a_{269}$ $(K11a_{269})$



1

Arc Sequences



Solving Sequence

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

Representation Ideals

$$I = \bigcap_{i=1}^{2} I_i^u$$

$I_1^u = \langle u^{20} - 2u^{19} + \cdots - 4u - 1,$
$4618473381u^{19} - 15410839901u^{18} + \cdots + 117668227895b + 38680521431,$
$48269462849u^{19} + 55826107871u^{18} + \cdots + 117668227895a - 1507821547426\rangle$

$I_2^u = \langle u^{95} + u^{94} + \cdots - 4620u + 413,$
$-3.97355 \times 10^{451}u^{94} - 1.40829 \times 10^{452}u^{93} + \cdots + 3.96267 \times 10^{452}a - 9.71933 \times 10^{454},$
$2.23283 \times 10^{452}u^{94} + 2.44640 \times 10^{452}u^{93} + \cdots + 2.02164 \times 10^{453}b - 1.27791 \times 10^{455}\rangle$

There are 2 irreducible components with 115 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.

$$\boldsymbol{I_1^u = \langle u^{20}-2u^{19}+\cdots-4u-1,\ 4.62\times10^{9}u^{19}-1.54\times10^{10}u^{18}+\cdots+1.18\times10^{11}b+ 3.87\times10^{10},\ 4.83\times10^{10}u^{19}+5.58\times10^{10}u^{18}+\cdots+1.18\times10^{11}a-1.51\times10^{12}\rangle}$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix}-0.410217u^{19}-0.474437u^{18}+\cdots+11.2752u+12.8142\\-0.0392500u^{19}+0.130969u^{18}+\cdots-0.458981u-0.328725\end{pmatrix}$$

$$a_3 = \begin{pmatrix}0.852011u^{19}-1.51052u^{18}+\cdots-10.6371u-3.81102\\0.0455080u^{19}-0.0786762u^{18}+\cdots-0.0400705u+0.0409937\end{pmatrix}$$

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

$$a_6 = \begin{pmatrix}u\\u\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.805638u^{19}+1.59036u^{18}+\cdots+9.99028u+3.43662\\0.0327196u^{19}+0.0279456u^{18}+\cdots+0.512452u-0.233366\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-0.908019u^{19}+0.559789u^{18}+\cdots+17.0355u+14.1615\\-0.537052u^{19}+1.16519u^{18}+\cdots+5.30134u+1.01861\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-5.13334u^{19}+11.5925u^{18}+\cdots+50.2993u+6.64870\\-0.00345535u^{19}+0.243075u^{18}+\cdots-0.799902u-1.22981\end{pmatrix}$$

$$a_8 = \begin{pmatrix}-0.410217u^{19}-0.474437u^{18}+\cdots+11.2752u+12.8142\\-0.632733u^{19}+1.38366u^{18}+\cdots+5.13071u+0.966145\end{pmatrix}$$

$$a_4 = \begin{pmatrix}-11.3559u^{19}+28.3386u^{18}+\cdots+95.4287u-13.1156\\0.973676u^{19}-1.84408u^{18}+\cdots-11.5545u-4.77483\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-4.29673u^{19}+9.41878u^{18}+\cdots+43.7423u+7.29845\\-0.230776u^{19}+0.637261u^{18}+\cdots+1.12061u-0.628265\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-4.29673u^{19}+9.41878u^{18}+\cdots+43.7423u+7.29845\\-0.230776u^{19}+0.637261u^{18}+\cdots+1.12061u-0.628265\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.02010-1.01652I$ $a=\ \ 0.088015-0.304807I$ $b=\ \ 0.623955-0.347636I$	$0.56563+3.09674I$	$-6.76716-10.88893I$
$u=-1.02010+1.01652I$ $a=\ \ 0.088015+0.304807I$ $b=\ \ 0.623955+0.347636I$	$0.56563-3.09674I$	$-6.76716+10.88893I$
$u=-0.753044$ $a=-0.505377$ $b=\ \ 1.09165$	2.55368	-46.5463
$u=-0.709585-0.477502I$ $a=-1.52248+0.63802I$ $b=-1.021465+0.831630I$	$-9.26140-7.75496I$	$-5.22152+4.05634I$
$u=-0.709585+0.477502I$ $a=-1.52248-0.63802I$ $b=-1.021465-0.831630I$	$-9.26140+7.75496I$	$-5.22152-4.05634I$
$u=-0.266707-0.833686I$ $a=-0.111303-0.198387I$ $b=-0.990531+0.597412I$	$-3.03393+5.03737I$	$-5.53695-5.83797I$
$u=-0.266707+0.833686I$ $a=-0.111303+0.198387I$ $b=-0.990531-0.597412I$	$-3.03393-5.03737I$	$-5.53695+5.83797I$
$u=-0.187628-0.273515I$ $a=\ \ 10.52025-1.77797I$ $b=-0.282880+0.146492I$	$-4.72545-0.21235I$	$-55.8595-30.4757I$
$u=-0.187628+0.273515I$ $a=\ \ 10.52025+1.77797I$ $b=-0.282880-0.146492I$	$-4.72545+0.21235I$	$-55.8595+30.4757I$
$u=-0.114871-1.101652I$ $a=\ \ 0.202248-1.135902I$ $b=-0.187298-0.957238I$	$-4.08582-2.63867I$	$-5.42623+3.15877I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.114871+1.101652I$ $a=\ 0.202248+1.135902I$ $b=-0.187298+0.957238I$	$-4.08582+2.63867I$	$-5.42623-3.15877I$
$u=\ 0.384905-0.944067I$ $a=\ 0.542906+1.052321I$ $b=\ 1.294476+0.373137I$	$-8.44781+0.56098I$	$-9.42748+0.13066I$
$u=\ 0.384905+0.944067I$ $a=\ 0.542906-1.052321I$ $b=\ 1.294476-0.373137I$	$-8.44781-0.56098I$	$-9.42748-0.13066I$
$u=\ 0.72246-1.37469I$ $a=\ 0.173351+0.848840I$ $b=\ 1.06231+1.10756I$	$-6.68894-7.90509I$	$-9.56805+7.40665I$
$u=\ 0.72246+1.37469I$ $a=\ 0.173351-0.848840I$ $b=\ 1.06231-1.10756I$	$-6.68894+7.90509I$	$-9.56805-7.40665I$
$u=\ 0.771081-1.073131I$ $a=-0.500306-0.946307I$ $b=-1.51046-0.98809I$	$-8.69484-5.65123I$	$-8.48652+3.86530I$
$u=\ 0.771081+1.073131I$ $a=-0.500306+0.946307I$ $b=-1.51046+0.98809I$	$-8.69484+5.65123I$	$-8.48652-3.86530I$
$u=\ 1.14673$ $a=\ 1.12981$ $b=\ 1.98637$	-0.749607	13.6673
$u=\ 1.223606-0.434885I$ $a=-0.704893-0.422400I$ $b=-0.527108+0.108505I$	$-2.58763+0.76692I$	$-4.26714-7.68799I$
$u=\ 1.223606+0.434885I$ $a=-0.704893+0.422400I$ $b=-0.527108-0.108505I$	$-2.58763-0.76692I$	$-4.26714+7.68799I$

II. $I_2^u = \langle u^{95}+u^{94}+\cdots-4620u+413,\ -3.97\times10^{451}u^{94}-1.41\times10^{452}u^{93}+\cdots+3.96\times10^{452}a-9.72\times10^{454},\ 2.23\times10^{452}u^{94}+2.45\times10^{452}u^{93}+\cdots+2.02\times10^{453}b-1.28\times10^{455}\rangle$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix}0.100274u^{94}+0.355389u^{93}+\cdots-1930.96u+245.272\\-0.110447u^{94}-0.121011u^{93}+\cdots-769.378u+63.2116\end{pmatrix}$$

$$a_3 = \begin{pmatrix}0.0171119u^{94}+0.0982498u^{93}+\cdots-774.549u+78.0323\\-0.0681054u^{94}-0.0132003u^{93}+\cdots-1270.28u+118.026\end{pmatrix}$$

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

$$a_6 = \begin{pmatrix}u\\u\end{pmatrix}$$

$$a_7 = \begin{pmatrix}-0.0248990u^{94}-0.0982244u^{93}+\cdots+264.796u-25.9726\\0.0945107u^{94}+0.0688891u^{93}+\cdots+901.658u-76.4569\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}-0.0157858u^{94}+0.241141u^{93}+\cdots-3071.37u+354.998\\-0.226507u^{94}-0.235260u^{93}+\cdots-1909.79u+172.937\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-0.350813u^{94}-0.511524u^{93}+\cdots-1738.51u+120.403\\-0.0156776u^{94}+0.0255712u^{93}+\cdots-561.635u+45.4509\end{pmatrix}$$

$$a_8 = \begin{pmatrix}0.100274u^{94}+0.355389u^{93}+\cdots-1930.96u+245.272\\-0.245749u^{94}-0.262285u^{93}+\cdots-1906.60u+168.574\end{pmatrix}$$

$$a_4 = \begin{pmatrix}0.385691u^{94}+0.821368u^{93}+\cdots-1990.18u+344.502\\-0.115288u^{94}-0.112866u^{93}+\cdots-1696.45u+172.867\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.203579u^{94}-0.275119u^{93}+\cdots-1306.93u+109.853\\-0.00866395u^{94}+0.00767950u^{93}+\cdots-283.703u+26.1484\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-0.203579u^{94}-0.275119u^{93}+\cdots-1306.93u+109.853\\-0.00866395u^{94}+0.00767950u^{93}+\cdots-283.703u+26.1484\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.79628-1.24505I$ $a=\ \ 0.591596-0.267074I$ $b=\ \ 0.670102+0.050121I$	$-10.12189-8.69430I$	$-11.8098+9.4052I$
$u=-1.79628+1.24505I$ $a=\ \ 0.591596+0.267074I$ $b=\ \ 0.670102-0.050121I$	$-10.12189+8.69430I$	$-11.8098-9.4052I$
$u=-1.56857-1.58771I$ $a=-0.423714+0.413059I$ $b=-0.650296+0.156829I$	$-5.36768-2.13610I$	$-13.16220+2.80541I$
$u=-1.56857+1.58771I$ $a=-0.423714-0.413059I$ $b=-0.650296-0.156829I$	$-5.36768+2.13610I$	$-13.16220-2.80541I$
$u=-1.23960$ $a=\ \ 1.06402$ $b=\ \ 1.94128$	-0.999308	-19.3675
$u=-1.23692-1.33958I$ $a=\ \ 0.440649-0.674581I$ $b=\ \ 0.810925-0.260713I$	$-10.30707+4.55633I$	$-12.01512-2.63494I$
$u=-1.23692+1.33958I$ $a=\ \ 0.440649+0.674581I$ $b=\ \ 0.810925+0.260713I$	$-10.30707-4.55633I$	$-12.01512+2.63494I$
$u=-1.09996-1.21488I$ $a=-0.520821+0.678574I$ $b=-1.42088+0.68462I$	$-10.59746+4.47338I$	$-10.59769-2.19179I$
$u=-1.09996+1.21488I$ $a=-0.520821-0.678574I$ $b=-1.42088-0.68462I$	$-10.59746-4.47338I$	$-10.59769+2.19179I$
$u=-1.03304-1.31434I$ $a=\ \ 0.369376-0.809589I$ $b=\ \ 1.29192-0.87487I$	$-6.46116+11.90456I$	$-5.30849-8.23485I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.03304+1.31434I$ $a=\ \ 0.369376+0.809589I$ $b=\ \ 1.29192+0.87487I$	$-6.46116-11.90456I$	$-5.30849+8.23485I$
$u=-1.020162-0.928280I$ $a=-0.1300240-0.0445700I$ $b=\ \ 0.412006-0.143113I$	$0.77353+2.77220I$	$4.28354+5.94685I$
$u=-1.020162+0.928280I$ $a=-0.1300240+0.0445700I$ $b=\ \ 0.412006+0.143113I$	$0.77353-2.77220I$	$4.28354-5.94685I$
$u=-0.99597-1.29562I$ $a=-0.381666+0.945128I$ $b=-1.34980+1.01638I$	$-11.7151+18.0173I$	$-6.74021-8.83639I$
$u=-0.99597+1.29562I$ $a=-0.381666-0.945128I$ $b=-1.34980-1.01638I$	$-11.7151-18.0173I$	$-6.74021+8.83639I$
$u=-0.886430-0.823895I$ $a=\ \ 0.259821-0.669107I$ $b=\ \ 1.038521-0.694331I$	$1.39130+4.10735I$	$0.47882-9.23280I$
$u=-0.886430+0.823895I$ $a=\ \ 0.259821+0.669107I$ $b=\ \ 1.038521+0.694331I$	$1.39130-4.10735I$	$0.47882+9.23280I$
$u=-0.883762-0.523829I$ $a=-1.075930+0.863099I$ $b=-1.95938+0.88819I$	$-7.36395+8.25849I$	$-3.45774-10.60850I$
$u=-0.883762+0.523829I$ $a=-1.075930-0.863099I$ $b=-1.95938-0.88819I$	$-7.36395-8.25849I$	$-3.45774+10.60850I$
$u=-0.842487-1.068535I$ $a=\ \ 0.394592+0.395062I$ $b=-0.392736+0.688310I$	$-1.00596+4.93534I$	$-0.73160-7.74623I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.842487+1.068535I$ $a=\ \ 0.394592-0.395062I$ $b=-0.392736-0.688310I$	$-1.00596-4.93534I$	$-0.73160+7.74623I$
$u=-0.825419-0.273465I$ $a=\ \ 0.049162+0.530546I$ $b=\ \ 0.381242+0.808986I$	$0.16031+2.08239I$	$3.28409-5.43220I$
$u=-0.825419+0.273465I$ $a=\ \ 0.049162-0.530546I$ $b=\ \ 0.381242-0.808986I$	$0.16031-2.08239I$	$3.28409+5.43220I$
$u=-0.779212-0.711416I$ $a=\ \ 0.137020+0.837077I$ $b=-0.552010+0.832283I$	$0.131344+1.193477I$	$-0.096952-1.100016I$
$u=-0.779212+0.711416I$ $a=\ \ 0.137020-0.837077I$ $b=-0.552010-0.832283I$	$0.131344-1.193477I$	$-0.096952+1.100016I$
$u=-0.608332-0.480772I$ $a=-1.73706-2.06493I$ $b=\ \ 0.517693-0.612351I$	$-4.42358-0.93929I$	$-6.65969-0.37836I$
$u=-0.608332+0.480772I$ $a=-1.73706+2.06493I$ $b=\ \ 0.517693+0.612351I$	$-4.42358+0.93929I$	$-6.65969+0.37836I$
$u=-0.523576-0.822357I$ $a=\ \ 0.882007+0.585807I$ $b=-0.729752+0.590749I$	$-1.32796+2.03593I$	$-2.81091-4.02942I$
$u=-0.523576+0.822357I$ $a=\ \ 0.882007-0.585807I$ $b=-0.729752-0.590749I$	$-1.32796-2.03593I$	$-2.81091+4.02942I$
$u=-0.520068-0.733256I$ $a=-0.587083-0.490814I$ $b=-1.28714-0.81886I$	$-5.40102+4.78928I$	$-9.00646-6.94418I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.520068+0.733256I$ $a=-0.587083+0.490814I$ $b=-1.28714+0.81886I$	$-5.40102-4.78928I$	$-9.00646+6.94418I$
$u=-0.472647-0.553891I$ $a=\ \ 0.278835+0.807041I$ $b=-0.362209+0.578699I$	$-0.082881+1.263941I$	$-0.49456-4.76991I$
$u=-0.472647+0.553891I$ $a=\ \ 0.278835-0.807041I$ $b=-0.362209-0.578699I$	$-0.082881-1.263941I$	$-0.49456+4.76991I$
$u=-0.315236-1.150100I$ $a=\ \ 0.214172-1.180814I$ $b=\ \ 0.784365-0.025234I$	$-10.15867-3.29748I$	$-10.61065+2.73010I$
$u=-0.315236+1.150100I$ $a=\ \ 0.214172+1.180814I$ $b=\ \ 0.784365+0.025234I$	$-10.15867+3.29748I$	$-10.61065-2.73010I$
$u=-0.313471-1.048336I$ $a=-0.350713+0.008429I$ $b=\ \ 0.944068-0.715877I$	$-4.85814+5.15679I$	$-9.29846-6.39710I$
$u=-0.313471+1.048336I$ $a=-0.350713-0.008429I$ $b=\ \ 0.944068+0.715877I$	$-4.85814-5.15679I$	$-9.29846+6.39710I$
$u=-0.227101-0.878925I$ $a=-0.08566-1.93639I$ $b=\ \ 0.915158-0.172370I$	$-11.2265+9.2254I$	$-10.45051-6.72895I$
$u=-0.227101+0.878925I$ $a=-0.08566+1.93639I$ $b=\ \ 0.915158+0.172370I$	$-11.2265-9.2254I$	$-10.45051+6.72895I$
$u=-0.147933-1.001071I$ $a=\ \ 0.20310+1.49141I$ $b=-0.821287+0.136900I$	$-6.11822+3.45479I$	$-10.09340-4.62390I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = -0.147933 + 1.001071I$ $a = 0.20310 - 1.49141I$ $b = -0.821287 - 0.136900I$	$-6.11822 - 3.45479I$	$-10.09340 + 4.62390I$
$u = -0.038657 - 0.595688I$ $a = -0.54208 + 2.25386I$ $b = -1.57695 + 2.00885I$	$-10.01015 - 8.00571I$	$-16.1566 + 8.7103I$
$u = -0.038657 + 0.595688I$ $a = -0.54208 - 2.25386I$ $b = -1.57695 - 2.00885I$	$-10.01015 + 8.00571I$	$-16.1566 - 8.7103I$
$u = 0.080696 - 0.534757I$ $a = -0.02385 + 3.34501I$ $b = 0.592401 + 0.292498I$	$-4.35844 + 0.30967I$	$-6.81908 + 1.81849I$
$u = 0.080696 + 0.534757I$ $a = -0.02385 - 3.34501I$ $b = 0.592401 - 0.292498I$	$-4.35844 - 0.30967I$	$-6.81908 - 1.81849I$
$u = 0.101754 - 0.803601I$ $a = -0.04983 - 1.59827I$ $b = -1.41179 - 0.21090I$	$-9.26018 + 1.58608I$	$-14.1671 - 4.0722I$
$u = 0.101754 + 0.803601I$ $a = -0.04983 + 1.59827I$ $b = -1.41179 + 0.21090I$	$-9.26018 - 1.58608I$	$-14.1671 + 4.0722I$
$u = 0.136643 - 0.545314I$ $a = -0.46237 - 2.19810I$ $b = 0.54201 - 1.66563I$	$-3.83969 - 3.68020I$	$-4.53257 + 11.26321I$
$u = 0.136643 + 0.545314I$ $a = -0.46237 + 2.19810I$ $b = 0.54201 + 1.66563I$	$-3.83969 + 3.68020I$	$-4.53257 - 11.26321I$
$u = 0.186094 - 0.908500I$ $a = 0.64895 + 1.37562I$ $b = 1.34819 + 1.48903I$	$-9.14776 - 1.14213I$	$-12.59664 + 3.13591I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.186094 + 0.908500I$ $a = 0.64895 - 1.37562I$ $b = 1.34819 - 1.48903I$	$-9.14776 + 1.14213I$	$-12.59664 - 3.13591I$
$u = 0.266857 - 0.761037I$ $a = -0.46432 - 1.48974I$ $b = -1.35039 - 1.25736I$	$-5.23639 - 1.80305I$	$-13.23540 + 2.61610I$
$u = 0.266857 + 0.761037I$ $a = -0.46432 + 1.48974I$ $b = -1.35039 + 1.25736I$	$-5.23639 + 1.80305I$	$-13.23540 - 2.61610I$
$u = 0.289920 - 0.347038I$ $a = 4.43135 + 2.06901I$ $b = 0.140540 + 0.194821I$	$-4.56432 + 0.25339I$	$3.07033 + 1.61590I$
$u = 0.289920 + 0.347038I$ $a = 4.43135 - 2.06901I$ $b = 0.140540 - 0.194821I$	$-4.56432 - 0.25339I$	$3.07033 - 1.61590I$
$u = 0.296769 - 0.764313I$ $a = 0.30613 + 1.66296I$ $b = 1.58026 + 1.14346I$	$-9.12386 - 3.30593I$	$-13.25743 + 1.78255I$
$u = 0.296769 + 0.764313I$ $a = 0.30613 - 1.66296I$ $b = 1.58026 - 1.14346I$	$-9.12386 + 3.30593I$	$-13.25743 - 1.78255I$
$u = 0.322450 - 0.356417I$ $a = -1.59734 + 1.65500I$ $b = 0.476242 - 0.403369I$	$-4.51152 - 0.64108I$	$-8.82354 + 0.62495I$
$u = 0.322450 + 0.356417I$ $a = -1.59734 - 1.65500I$ $b = 0.476242 + 0.403369I$	$-4.51152 + 0.64108I$	$-8.82354 - 0.62495I$
$u = 0.458178 - 0.416404I$ $a = 0.369629 - 0.869821I$ $b = -1.17881 - 1.03722I$	$-2.17172 - 5.56944I$	$1.76299 + 10.26758I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.458178 + 0.416404I$ $a = 0.369629 + 0.869821I$ $b = -1.17881 + 1.03722I$	$-2.17172 + 5.56944I$	$1.76299 - 10.26758I$
$u = 0.519284 - 0.947416I$ $a = -0.0656807 + 0.0862099I$ $b = -0.571920 + 0.468809I$	$-1.33339 + 1.63852I$	$-3.10982 - 5.30448I$
$u = 0.519284 + 0.947416I$ $a = -0.0656807 - 0.0862099I$ $b = -0.571920 - 0.468809I$	$-1.33339 - 1.63852I$	$-3.10982 + 5.30448I$
$u = 0.588923 - 0.321312I$ $a = -0.895432 + 0.377870I$ $b = 0.627267 + 0.558442I$	$2.42910 - 0.66447I$	$6.25636 - 0.46439I$
$u = 0.588923 + 0.321312I$ $a = -0.895432 - 0.377870I$ $b = 0.627267 - 0.558442I$	$2.42910 + 0.66447I$	$6.25636 + 0.46439I$
$u = 0.607094 - 0.878051I$ $a = 0.146770 - 0.244130I$ $b = -1.226856 - 0.379667I$	$-5.51333 - 3.00258I$	$-8.76835 + 4.40722I$
$u = 0.607094 + 0.878051I$ $a = 0.146770 + 0.244130I$ $b = -1.226856 + 0.379667I$	$-5.51333 + 3.00258I$	$-8.76835 - 4.40722I$
$u = 0.62938 - 1.26887I$ $a = 0.331227 + 0.882907I$ $b = 1.40869 + 1.21803I$	$-8.90213 - 6.92952I$	$-11.1069 + 8.8495I$
$u = 0.62938 + 1.26887I$ $a = 0.331227 - 0.882907I$ $b = 1.40869 - 1.21803I$	$-8.90213 + 6.92952I$	$-11.1069 - 8.8495I$
$u = 0.681806 - 0.857942I$ $a = -0.647408 - 1.151020I$ $b = -0.767364 - 1.147114I$	$-5.82363 - 4.27424I$	$-3.11897 + 3.96480I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.681806 + 0.857942I$ $a = -0.647408 + 1.151020I$ $b = -0.767364 + 1.147114I$	$-5.82363 + 4.27424I$	$-3.11897 - 3.96480I$
$u = 0.694782 - 0.268930I$ $a = 1.343808 - 0.387535I$ $b = -0.128698 - 0.635267I$	$-0.92977 + 3.70164I$	$0.72296 - 3.78626I$
$u = 0.694782 + 0.268930I$ $a = 1.343808 + 0.387535I$ $b = -0.128698 + 0.635267I$	$-0.92977 - 3.70164I$	$0.72296 + 3.78626I$
$u = 0.70841 - 1.60168I$ $a = -0.170143 - 0.769268I$ $b = -0.726083 - 1.147073I$	$-5.58860 - 8.53903I$	$-3.08355 + 10.89748I$
$u = 0.70841 + 1.60168I$ $a = -0.170143 + 0.769268I$ $b = -0.726083 + 1.147073I$	$-5.58860 + 8.53903I$	$-3.08355 - 10.89748I$
$u = 0.758264$ $a = -0.394256$ $b = 1.11905$	2.64340	43.0785
$u = 0.789825 - 0.881356I$ $a = -0.447560 + 0.734474I$ $b = 0.933913 + 0.703046I$	$-0.90223 - 7.26936I$	$-1.58598 + 7.70751I$
$u = 0.789825 + 0.881356I$ $a = -0.447560 - 0.734474I$ $b = 0.933913 - 0.703046I$	$-0.90223 + 7.26936I$	$-1.58598 - 7.70751I$
$u = 0.796800 - 1.121497I$ $a = 0.485491 - 0.234980I$ $b = 0.771864 - 0.634932I$	$-5.15661 + 5.20956I$	$-8.82583 - 6.41151I$
$u = 0.796800 + 1.121497I$ $a = 0.485491 + 0.234980I$ $b = 0.771864 + 0.634932I$	$-5.15661 - 5.20956I$	$-8.82583 + 6.41151I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.80869 - 1.27228I$ $a = -0.270464 - 0.905355I$ $b = -1.20108 - 1.02426I$	$-5.86002 - 7.03617I$	$-4.37170 + 2.64890I$
$u = 0.80869 + 1.27228I$ $a = -0.270464 + 0.905355I$ $b = -1.20108 + 1.02426I$	$-5.86002 + 7.03617I$	$-4.37170 - 2.64890I$
$u = 0.848973 - 0.138639I$ $a = -1.67816 - 0.60104I$ $b = -0.589267 + 0.239231I$	$-5.52730 + 1.54119I$	$-3.04624 - 3.37568I$
$u = 0.848973 + 0.138639I$ $a = -1.67816 + 0.60104I$ $b = -0.589267 - 0.239231I$	$-5.52730 - 1.54119I$	$-3.04624 + 3.37568I$
$u = 0.887227 - 0.916820I$ $a = 0.385311 - 1.074610I$ $b = -0.927074 - 0.930158I$	$-4.71304 - 11.85199I$	$-4.98978 + 9.81569I$
$u = 0.887227 + 0.916820I$ $a = 0.385311 + 1.074610I$ $b = -0.927074 + 0.930158I$	$-4.71304 + 11.85199I$	$-4.98978 - 9.81569I$
$u = 0.99335 - 1.22763I$ $a = 0.409555 + 1.086460I$ $b = 1.27813 + 0.94443I$	$-10.61241 - 8.00084I$	$-10.32105 + 6.17666I$
$u = 0.99335 + 1.22763I$ $a = 0.409555 - 1.086460I$ $b = 1.27813 - 0.94443I$	$-10.61241 + 8.00084I$	$-10.32105 - 6.17666I$
$u = 1.08068 - 1.80388I$ $a = 0.286327 + 0.555617I$ $b = 0.632989 + 0.677759I$	$-3.29557 - 3.88851I$	$-2.62925 + 8.32938I$
$u = 1.08068 + 1.80388I$ $a = 0.286327 - 0.555617I$ $b = 0.632989 - 0.677759I$	$-3.29557 + 3.88851I$	$-2.62925 - 8.32938I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.08328$ $a = 1.08250$ $b = 0.822121$	-2.63135	-2.77191
$u = 1.278358 - 0.135053I$ $a = 0.850911 + 0.047957I$ $b = 0.667791 - 0.179813I$	$-2.66399 + 0.03648I$	$-5.52133 + 0.36616I$
$u = 1.278358 + 0.135053I$ $a = 0.850911 - 0.047957I$ $b = 0.667791 + 0.179813I$	$-2.66399 - 0.03648I$	$-5.52133 - 0.36616I$
$u = 1.28131 - 1.29593I$ $a = -0.669359 - 0.431872I$ $b = -1.025761 - 0.208352I$	$-9.79145 - 0.88028I$	$-12.91704 + 2.64455I$
$u = 1.28131 + 1.29593I$ $a = -0.669359 + 0.431872I$ $b = -1.025761 + 0.208352I$	$-9.79145 + 0.88028I$	$-12.91704 - 2.64455I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{20}-3u^{19}+\cdots-8u+3)(u^{95}+8u^{94}+\cdots-1011205u-170727)$
c_2	$(u^{20}-6u^{18}+\cdots+7u+1)(u^{95}+3u^{94}+\cdots+6615u-451)$
c_3	$(u^{20}+3u^{19}+\cdots+10u+1)(u^{95}+6u^{94}+\cdots+2006u+1867)$
c_4	$(u^{20}-4u^{19}+\cdots-8u+1)(u^{95}+5u^{94}+\cdots+290u+31)$
c_5	$(u^{20}+2u^{19}+\cdots+4u-1)(u^{95}+u^{94}+\cdots-4620u+413)$
c_6	$(u^{20}-3u^{19}+\cdots-24u-11)$ $(u^{95}+2u^{94}+\cdots-4406820u+7707112)$
c_7	$(u^{20}-u^{19}+\cdots-4u-1)(u^{95}+35u^{93}+\cdots-304u-31)$
c_8	$(u^{20}+4u^{19}+\cdots+8u+1)(u^{95}+5u^{94}+\cdots+290u+31)$
c_9	$(u^{20}+6u^{19}+\cdots-u-1)(u^{95}+u^{94}+\cdots-13u-1)$
c_{10}	$(u^{20}+u^{19}+\cdots+8u-1)(u^{95}-23u^{93}+\cdots-51119u-2537)$
c_{11}	$(u^{20}+u^{19}+\cdots+4u-1)(u^{95}+35u^{93}+\cdots-304u-31)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y^{20}-7y^{19}+\cdots+74y+9)$ $(y^{95}+32y^{94}+\cdots-975808706847y-29148383760)$
c_2	$(y^{20}-12y^{19}+\cdots-21y+1)$ $(y^{95}-33y^{94}+\cdots+5314082y-203401)$
c_3	$(y^{20}-9y^{19}+\cdots-30y+1)$ $(y^{95}-34y^{94}+\cdots+99285806y-3485686)$
c_4	$(y^{20}-20y^{19}+\cdots-16y+1)(y^{95}-89y^{94}+\cdots-142386y-961)$
c_5	$(y^{20}+4y^{19}+\cdots+8y+1)(y^{95}+23y^{94}+\cdots-4607694y-170569)$
c_6	$(y^{20}-13y^{19}+\cdots-906y+121)$ $(y^{95}-58y^{94}+\cdots+1536043799114840y-59400176528544)$
c_7, c_{11}	$(y^{20}+11y^{19}+\cdots-40y^2+1)(y^{95}+70y^{94}+\cdots+1947y-960)$
c_8	$(y^{20}-20y^{19}+\cdots-16y+1)(y^{95}-89y^{94}+\cdots-142386y-961)$
c_9	$(y^{20}+182y^{18}+\cdots+7y+1)(y^{95}+11y^{94}+\cdots-61y-1)$
c_{10}	$(y^{20}-9y^{19}+\cdots-30y+1)$ $(y^{95}-46y^{94}+\cdots+1721711975y-6435362)$