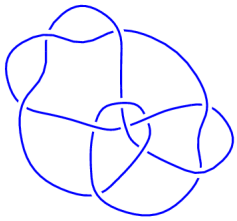
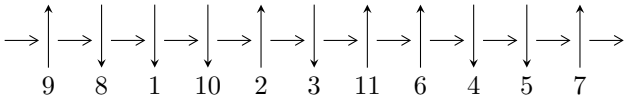
$11a_{268}$ $(K11a_{268})$



1

Arc Sequences



Solving Sequence

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

Representation Ideals

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

$$\begin{aligned} I_1^u = \langle & u^{20} + 4u^{18} + \cdots - 3u - 1,\ 63903312u^{19} + 453578u^{18} + \cdots + 55899125a - 323065377, \\ & 3983906234u^{19} - 1854796104u^{18} + \cdots + 1196241275b - 8030147964 \rangle \\ I_2^u = \langle & u^{89} + u^{88} + \cdots + 84u - 2543, \\ & -8.36409 \times 10^{387}u^{88} - 1.04032 \times 10^{388}u^{87} + \cdots + 9.38838 \times 10^{389}b + 3.56566 \times 10^{390}, \\ & -4.36623 \times 10^{391}u^{88} - 5.85109 \times 10^{391}u^{87} + \cdots + 2.38746 \times 10^{393}a - 3.96726 \times 10^{394} \rangle \end{aligned}$$

There are 2 irreducible components with 109 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.

$$\boldsymbol{I_1^u = \langle u^{20}+4u^{18}+\cdots-3u-1,\ 6.39\times10^7u^{19}+4.54\times10^5u^{18}+\cdots+5.59\times10^7a-3.23\times10^8,\ 3.98\times10^9u^{19}-1.85\times10^9u^{18}+\cdots+1.20\times10^9b-8.03\times10^9\rangle}$$

(i) Arc colorings

$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-1.14319u^{19}-0.00811422u^{18}+\cdots+1.80940u+5.77944\\-3.33035u^{19}+1.55052u^{18}+\cdots+6.81571u+6.71282\end{pmatrix}$$

$$a_8 = \begin{pmatrix}4.77944u^{19}-1.14319u^{18}+\cdots-4.35297u-12.5289\\4.68504u^{19}-2.46863u^{18}+\cdots-8.70082u-9.00452\end{pmatrix}$$

$$a_1 = \begin{pmatrix}-1.14319u^{19}-0.00811422u^{18}+\cdots+1.80940u+5.77944\\-3.72297u^{19}+1.90690u^{18}+\cdots+7.98324u+6.72093\end{pmatrix}$$

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

$$a_4 = \begin{pmatrix}-7.86133u^{19}+4.69316u^{18}+\cdots+17.4122u+13.5333\\4.50777u^{19}-2.47019u^{18}+\cdots-10.1925u-7.53582\end{pmatrix}$$

$$a_2 = \begin{pmatrix}11.5325u^{19}-5.90676u^{18}+\cdots-24.1972u-23.2035\\5.95275u^{19}-2.99175u^{18}+\cdots-12.0233u-12.2620\end{pmatrix}$$

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

$$a_9 = \begin{pmatrix}6.08507u^{19}-2.11917u^{18}+\cdots-8.42369u-13.8543\\5.99068u^{19}-3.44461u^{18}+\cdots-12.7715u-10.3300\end{pmatrix}$$

$$a_5 = \begin{pmatrix}-9.69672u^{19}+4.72549u^{18}+\cdots+18.7934u+19.2966\\-4.89080u^{19}+2.52801u^{18}+\cdots+9.94731u+9.69685\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}5.88258u^{19}-3.13836u^{18}+\cdots-10.8875u-9.18916\\-0.498050u^{19}+0.220098u^{18}+\cdots+2.91851u+1.05551\end{pmatrix}$$

$$a_{10} = \begin{pmatrix}5.88258u^{19}-3.13836u^{18}+\cdots-10.8875u-9.18916\\-0.498050u^{19}+0.220098u^{18}+\cdots+2.91851u+1.05551\end{pmatrix}$$

(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
$u=-0.920204-0.446036I$ $a=-0.010899-1.235491I$ $b=\ \ 0.56082-2.26819I$	$-5.23739-5.55861I$	$-8.63842+8.06052I$
$u=-0.920204+0.446036I$ $a=-0.010899+1.235491I$ $b=\ \ 0.56082+2.26819I$	$-5.23739+5.55861I$	$-8.63842-8.06052I$
$u=-0.732984-0.987021I$ $a=-0.728571-0.864853I$ $b=\ \ 0.16357-1.45959I$	$-9.99863-6.70009I$	$-6.33266+4.76825I$
$u=-0.732984+0.987021I$ $a=-0.728571+0.864853I$ $b=\ \ 0.16357+1.45959I$	$-9.99863+6.70009I$	$-6.33266-4.76825I$
$u=-0.572386-0.096735I$ $a=\ \ 1.58699-1.54169I$ $b=-0.573417-0.162255I$	$-5.62801+1.51138I$	$-5.02190-9.76370I$
$u=-0.572386+0.096735I$ $a=\ \ 1.58699+1.54169I$ $b=-0.573417+0.162255I$	$-5.62801-1.51138I$	$-5.02190+9.76370I$
$u=-0.485579$ $a=\ \ 2.62617$ $b=\ \ 0.759645$	-1.31038	6.20021
$u=-0.300055-0.812653I$ $a=\ \ 0.671829+0.120599I$ $b=\ \ 1.137435-0.548250I$	$-2.20697-2.35727I$	$0.75955+2.29179I$
$u=-0.300055+0.812653I$ $a=\ \ 0.671829-0.120599I$ $b=\ \ 1.137435+0.548250I$	$-2.20697+2.35727I$	$0.75955-2.29179I$
$u=-0.19540-1.74306I$ $a=\ \ 0.429584+0.034906I$ $b=-1.37623+0.62846I$	$0.16874+2.77142I$	$2.49688-6.12151I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.19540+1.74306I$ $a=\ 0.429584-0.034906I$ $b=-1.37623-0.62846I$	$0.16874-2.77142I$	$2.49688+6.12151I$
$u=\ 0.274254-1.252554I$ $a=\ 0.531825-0.073625I$ $b=-0.203408+0.314069I$	$0.41433+2.93710I$	$-8.44025-5.37355I$
$u=\ 0.274254+1.252554I$ $a=\ 0.531825+0.073625I$ $b=-0.203408-0.314069I$	$0.41433-2.93710I$	$-8.44025+5.37355I$
$u=\ 0.483546$ $a=\ 2.68251$ $b=\ 0.293804$	2.35090	-37.5794
$u=\ 0.558207-0.814180I$ $a=\ 0.628287-0.218750I$ $b=-1.20875-1.95898I$	$-5.94321-6.14570I$	$-10.52858+8.02706I$
$u=\ 0.558207+0.814180I$ $a=\ 0.628287+0.218750I$ $b=-1.20875+1.95898I$	$-5.94321+6.14570I$	$-10.52858-8.02706I$
$u=\ 0.869606-0.821260I$ $a=-0.500306+1.006153I$ $b=\ 0.379049+1.157254I$	$-2.62899+3.66788I$	$-5.57286-1.70794I$
$u=\ 0.869606+0.821260I$ $a=-0.500306-1.006153I$ $b=\ 0.379049-1.157254I$	$-2.62899-3.66788I$	$-5.57286+1.70794I$
$u=\ 1.019979-0.686033I$ $a=-0.263086+0.998099I$ $b=\ 0.59421+1.97897I$	$-2.35880+5.00950I$	$-4.53218-5.02781I$
$u=\ 1.019979+0.686033I$ $a=-0.263086-0.998099I$ $b=\ 0.59421-1.97897I$	$-2.35880-5.00950I$	$-4.53218+5.02781I$

II. $I_2^u = \langle u^{89} + u^{88} + \cdots + 84u - 2543,\ -8.36 \times 10^{387} u^{88} - 1.04 \times 10^{388} u^{87} + \cdots + 9.39 \times 10^{389} b + 3.57 \times 10^{390},\ -4.37 \times 10^{391} u^{88} - 5.85 \times 10^{391} u^{87} + \cdots + 2.39 \times 10^{393} a - 3.97 \times 10^{394} \rangle$

(i) Arc colorings

$$a_7 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} 0.0182882u^{88} + 0.0245075u^{87} + \cdots + 142.169u + 16.6170 \\ 0.00890898u^{88} + 0.0110809u^{87} + \cdots + 66.2207u - 3.79795 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.0148129u^{88} - 0.0230845u^{87} + \cdots - 69.1163u - 7.62590 \\ 0.00107982u^{88} + 0.000450313u^{87} + \cdots - 8.81296u - 5.27923 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} 0.0182882u^{88} + 0.0245075u^{87} + \cdots + 142.169u + 16.6170 \\ 0.00250776u^{88} + 0.00175897u^{87} + \cdots + 20.2363u - 19.6138 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 0.00619567u^{88} + 0.0140839u^{87} + \cdots + 33.7286u + 28.6817 \\ -0.00564619u^{88} - 0.00250203u^{87} + \cdots - 53.0921u + 8.63113 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.00948500u^{88} + 0.00242833u^{87} + \cdots + 89.5960u - 77.0361 \\ 0.00888330u^{88} + 0.00717275u^{87} + \cdots + 58.1536u - 27.7455 \end{pmatrix}$$

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

$$a_9 = \begin{pmatrix} -0.00726070u^{88} - 0.0105483u^{87} + \cdots - 29.3431u + 11.8081 \\ 0.00863198u^{88} + 0.0129865u^{87} + \cdots + 30.9602u + 14.1548 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.00230112u^{88} - 0.00641861u^{87} + \cdots + 82.8821u - 85.2664 \\ 0.00155642u^{88} + 0.000642548u^{87} + \cdots + 9.80660u - 25.5485 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00472895u^{88} + 0.00149100u^{87} + \cdots - 93.6545u + 68.4368 \\ 0.00583296u^{88} + 0.00647773u^{87} + \cdots - 3.60709u - 16.4222 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.00472895u^{88} + 0.00149100u^{87} + \cdots - 93.6545u + 68.4368 \\ 0.00583296u^{88} + 0.00647773u^{87} + \cdots - 3.60709u - 16.4222 \end{pmatrix}$$

(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
$u=-1.46438-0.92926I$ $a=\ \ 0.207807+0.773312I$ $b=-0.76875+2.07688I$	$-4.63913-7.16183I$	$-6.35797+5.29478I$
$u=-1.46438+0.92926I$ $a=\ \ 0.207807-0.773312I$ $b=-0.76875-2.07688I$	$-4.63913+7.16183I$	$-6.35797-5.29478I$
$u=-1.44730-0.78897I$ $a=-0.077106-0.706634I$ $b=\ \ 0.36643-2.22004I$	$-3.75095-4.98969I$	$-9.19267+8.65960I$
$u=-1.44730+0.78897I$ $a=-0.077106+0.706634I$ $b=\ \ 0.36643+2.22004I$	$-3.75095+4.98969I$	$-9.19267-8.65960I$
$u=-1.40808-0.97394I$ $a=\ \ 0.160031+0.872871I$ $b=-0.60195+2.18010I$	$-10.6453-17.3382I$	$-6.68042+8.68737I$
$u=-1.40808+0.97394I$ $a=\ \ 0.160031-0.872871I$ $b=-0.60195-2.18010I$	$-10.6453+17.3382I$	$-6.68042-8.68737I$
$u=-1.191082-0.080568I$ $a=\ \ 0.364776-0.891341I$ $b=-0.52660-1.36846I$	$-3.66544-1.93275I$	$-9.84934+1.25490I$
$u=-1.191082+0.080568I$ $a=\ \ 0.364776+0.891341I$ $b=-0.52660+1.36846I$	$-3.66544+1.93275I$	$-9.84934-1.25490I$
$u=-1.130118-0.483941I$ $a=-0.077722-1.317829I$ $b=\ \ 0.46589-1.94609I$	$-7.35822-7.24063I$	$-5.48519+8.01234I$
$u=-1.130118+0.483941I$ $a=-0.077722+1.317829I$ $b=\ \ 0.46589+1.94609I$	$-7.35822+7.24063I$	$-5.48519-8.01234I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.117053-0.384555I$ $a=\ \ 0.277854-0.956410I$ $b=\ \ 0.39551-1.90482I$	$-4.26488-4.97917I$	$-1.90496+6.21325I$
$u=-1.117053+0.384555I$ $a=\ \ 0.277854+0.956410I$ $b=\ \ 0.39551+1.90482I$	$-4.26488+4.97917I$	$-1.90496-6.21325I$
$u=-1.044917-0.622691I$ $a=-0.955676+0.447482I$ $b=-0.032877-0.173826I$	$-6.62392-10.71347I$	$-5.42331+7.09113I$
$u=-1.044917+0.622691I$ $a=-0.955676-0.447482I$ $b=-0.032877+0.173826I$	$-6.62392+10.71347I$	$-5.42331-7.09113I$
$u=-1.031155-0.909995I$ $a=\ \ 0.466224+0.661728I$ $b=-0.89714+1.37568I$	$-1.75568-2.78654I$	$-3.96265+0.80830I$
$u=-1.031155+0.909995I$ $a=\ \ 0.466224-0.661728I$ $b=-0.89714-1.37568I$	$-1.75568+2.78654I$	$-3.96265-0.80830I$
$u=-1.030796-0.166941I$ $a=-0.07087+1.58171I$ $b=\ \ 0.29845+1.40586I$	$-12.68786+4.35097I$	$-10.38679-2.99509I$
$u=-1.030796+0.166941I$ $a=-0.07087-1.58171I$ $b=\ \ 0.29845-1.40586I$	$-12.68786-4.35097I$	$-10.38679+2.99509I$
$u=-1.017063-0.460738I$ $a=-0.365313-0.892723I$ $b=-0.74922-1.60297I$	$-4.07004-0.47327I$	$-8.11473+0.01216I$
$u=-1.017063+0.460738I$ $a=-0.365313+0.892723I$ $b=-0.74922+1.60297I$	$-4.07004+0.47327I$	$-8.11473-0.01216I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.800692-0.560525I$ $a=\ \ 0.516941-0.177447I$ $b=-0.423534+0.016157I$	$-1.23216-1.17836I$	$-4.88311+4.54684I$
$u=-0.800692+0.560525I$ $a=\ \ 0.516941+0.177447I$ $b=-0.423534-0.016157I$	$-1.23216+1.17836I$	$-4.88311-4.54684I$
$u=-0.782757$ $a=\ \ 1.95040$ $b=\ \ 0.449560$	-2.00885	-7.27944
$u=-0.775482-0.702564I$ $a=\ \ 0.070862+0.335267I$ $b=-1.40250+1.31661I$	$-5.46219+5.61812I$	$-2.79757-0.10435I$
$u=-0.775482+0.702564I$ $a=\ \ 0.070862-0.335267I$ $b=-1.40250-1.31661I$	$-5.46219-5.61812I$	$-2.79757+0.10435I$
$u=-0.70775-2.08057I$ $a=-0.521011-0.063733I$ $b=\ \ 1.226700-0.645730I$	$-7.96934+7.75557I$	$-5.83315-9.04917I$
$u=-0.70775+2.08057I$ $a=-0.521011+0.063733I$ $b=\ \ 1.226700+0.645730I$	$-7.96934-7.75557I$	$-5.83315+9.04917I$
$u=-0.695662-0.461228I$ $a=-0.66342-1.53474I$ $b=-0.92728-1.80614I$	$-11.08239-7.06191I$	$-14.3070+7.3501I$
$u=-0.695662+0.461228I$ $a=-0.66342+1.53474I$ $b=-0.92728+1.80614I$	$-11.08239+7.06191I$	$-14.3070-7.3501I$
$u=-0.692230-0.691299I$ $a=\ \ 0.67232+1.47767I$ $b=-0.326730+0.897497I$	$-2.70633-4.15001I$	$-9.2225+18.2393I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.692230+0.691299I$ $a=\ \ 0.67232-1.47767I$ $b=-0.326730-0.897497I$	$-2.70633+4.15001I$	$-9.2225-18.2393I$
$u=-0.659896-0.535201I$ $a=-0.513333-1.119510I$ $b=\ \ 0.91838-2.22628I$	$-0.59074-5.03975I$	$-0.37180+8.73151I$
$u=-0.659896+0.535201I$ $a=-0.513333+1.119510I$ $b=\ \ 0.91838+2.22628I$	$-0.59074+5.03975I$	$-0.37180-8.73151I$
$u=-0.619681-0.601987I$ $a=-0.409203+0.887975I$ $b=\ \ 0.274977-0.196294I$	$0.06582-2.81820I$	$0.23839+4.97032I$
$u=-0.619681+0.601987I$ $a=-0.409203-0.887975I$ $b=\ \ 0.274977+0.196294I$	$0.06582+2.81820I$	$0.23839-4.97032I$
$u=-0.596379$ $a=\ \ 1.14585$ $b=\ \ 0.571104$	-2.43815	-4.51530
$u=-0.531325-0.593484I$ $a=\ \ 1.34480-0.49436I$ $b=\ \ 0.346204+0.166649I$	$-2.70373+0.98079I$	$-1.75261-1.15561I$
$u=-0.531325+0.593484I$ $a=\ \ 1.34480+0.49436I$ $b=\ \ 0.346204-0.166649I$	$-2.70373-0.98079I$	$-1.75261+1.15561I$
$u=-0.477386-0.066075I$ $a=\ \ 1.29452+1.82122I$ $b=\ \ 0.06476+1.52905I$	$-4.69329+4.27856I$	$-4.35092-2.98387I$
$u=-0.477386+0.066075I$ $a=\ \ 1.29452-1.82122I$ $b=\ \ 0.06476-1.52905I$	$-4.69329-4.27856I$	$-4.35092+2.98387I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.352124-1.046439I$ $a=\ 0.555372+0.041707I$ $b=\ 0.324147-0.362843I$	$0.84180-2.66745I$	$5.74905-1.98095I$
$u=-0.352124+1.046439I$ $a=\ 0.555372-0.041707I$ $b=\ 0.324147+0.362843I$	$0.84180+2.66745I$	$5.74905+1.98095I$
$u=-0.288716-1.130940I$ $a=-0.154476-0.263099I$ $b=\ 0.516252-0.223314I$	$1.14260-3.25401I$	$3.95954+7.62313I$
$u=-0.288716+1.130940I$ $a=-0.154476+0.263099I$ $b=\ 0.516252+0.223314I$	$1.14260+3.25401I$	$3.95954-7.62313I$
$u=\ 0.111187-1.159689I$ $a=\ 0.862300-0.123013I$ $b=\ 0.379329+0.405946I$	$-3.50317+2.78548I$	$-6.25542-3.26156I$
$u=\ 0.111187+1.159689I$ $a=\ 0.862300+0.123013I$ $b=\ 0.379329-0.405946I$	$-3.50317-2.78548I$	$-6.25542+3.26156I$
$u=\ 0.155945-0.596885I$ $a=\ 0.30434+1.38663I$ $b=\ 0.339862-0.017109I$	$2.36715+0.35769I$	$7.82388+1.85714I$
$u=\ 0.155945+0.596885I$ $a=\ 0.30434-1.38663I$ $b=\ 0.339862+0.017109I$	$2.36715-0.35769I$	$7.82388-1.85714I$
$u=\ 0.19737-2.33544I$ $a=-0.420958-0.001789I$ $b=\ 1.55666+0.17870I$	$-0.50502-3.23925I$	$-3.97067+7.51565I$
$u=\ 0.19737+2.33544I$ $a=-0.420958+0.001789I$ $b=\ 1.55666-0.17870I$	$-0.50502+3.23925I$	$-3.97067-7.51565I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.410749 - 0.471628I$ $a = 1.284800 - 0.422379I$ $b = -0.145829 - 0.802914I$	$-0.12055 - 1.56154I$	$-0.20818 + 3.43481I$
$u = 0.410749 + 0.471628I$ $a = 1.284800 + 0.422379I$ $b = -0.145829 + 0.802914I$	$-0.12055 + 1.56154I$	$-0.20818 - 3.43481I$
$u = 0.418317$ $a = 2.98267$ $b = 0.375680$	2.46420	33.6241
$u = 0.560076 - 1.171314I$ $a = 0.671054 + 0.204537I$ $b = 0.223167 + 0.438075I$	$-4.51518 + 3.24714I$	$-5.57266 - 2.73443I$
$u = 0.560076 + 1.171314I$ $a = 0.671054 - 0.204537I$ $b = 0.223167 - 0.438075I$	$-4.51518 - 3.24714I$	$-5.57266 + 2.73443I$
$u = 0.571797 - 0.795448I$ $a = -0.491871 + 0.914291I$ $b = 0.61211 + 2.51423I$	$-5.19564 + 7.48572I$	$-6.12867 - 11.33536I$
$u = 0.571797 + 0.795448I$ $a = -0.491871 - 0.914291I$ $b = 0.61211 - 2.51423I$	$-5.19564 - 7.48572I$	$-6.12867 + 11.33536I$
$u = 0.627270 - 0.234640I$ $a = -0.61649 + 1.48107I$ $b = 1.18175 + 1.63408I$	$-3.66917 + 2.24819I$	$-7.46389 - 2.06250I$
$u = 0.627270 + 0.234640I$ $a = -0.61649 - 1.48107I$ $b = 1.18175 - 1.63408I$	$-3.66917 - 2.24819I$	$-7.46389 + 2.06250I$
$u = 0.641469 - 0.112408I$ $a = -1.97692 - 1.26672I$ $b = 0.185757 - 0.080789I$	$-5.83989 - 1.30562I$	$-24.9817 - 6.5610I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.641469 + 0.112408I$ $a = -1.97692 + 1.26672I$ $b = 0.185757 + 0.080789I$	$-5.83989 + 1.30562I$	$-24.9817 + 6.5610I$
$u = 0.686607 - 0.222863I$ $a = -0.08998 - 1.96347I$ $b = 0.455844 - 0.912488I$	$-4.57148 - 1.94462I$	$-8.58806 + 6.86868I$
$u = 0.686607 + 0.222863I$ $a = -0.08998 + 1.96347I$ $b = 0.455844 + 0.912488I$	$-4.57148 + 1.94462I$	$-8.58806 - 6.86868I$
$u = 0.793130 - 0.382921I$ $a = -0.35631 + 1.37664I$ $b = -0.76428 + 1.72513I$	$-4.75803 + 4.24642I$	$-9.99593 - 7.14193I$
$u = 0.793130 + 0.382921I$ $a = -0.35631 - 1.37664I$ $b = -0.76428 - 1.72513I$	$-4.75803 - 4.24642I$	$-9.99593 + 7.14193I$
$u = 0.911465 - 0.659115I$ $a = -0.799511 - 0.508697I$ $b = 0.061580 + 0.226853I$	$-0.03232 + 7.23979I$	$-1.36389 - 8.17769I$
$u = 0.911465 + 0.659115I$ $a = -0.799511 + 0.508697I$ $b = 0.061580 - 0.226853I$	$-0.03232 - 7.23979I$	$-1.36389 + 8.17769I$
$u = 0.920623 - 0.747247I$ $a = 0.318526 - 1.299100I$ $b = -0.336502 - 1.236948I$	$-9.42451 + 9.01167I$	$-6.58514 - 8.56377I$
$u = 0.920623 + 0.747247I$ $a = 0.318526 + 1.299100I$ $b = -0.336502 + 1.236948I$	$-9.42451 - 9.01167I$	$-6.58514 + 8.56377I$
$u = 0.960722 - 0.879130I$ $a = 0.321524 - 0.430056I$ $b = -1.08054 - 1.31714I$	$0.09907 - 1.94759I$	$1.047268 - 0.082305I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.960722 + 0.879130I$ $a = 0.321524 + 0.430056I$ $b = -1.08054 + 1.31714I$	$0.09907 + 1.94759I$	$1.047268 + 0.082305I$
$u = 0.993481 - 0.278310I$ $a = 0.534357 - 0.344154I$ $b = -0.240491 - 1.078669I$	$-0.11272 - 1.93319I$	$1.42858 + 4.41047I$
$u = 0.993481 + 0.278310I$ $a = 0.534357 + 0.344154I$ $b = -0.240491 + 1.078669I$	$-0.11272 + 1.93319I$	$1.42858 - 4.41047I$
$u = 1.001690 - 0.662057I$ $a = -0.632037 + 0.764776I$ $b = -0.70987 + 1.46300I$	$-9.69819 - 3.33662I$	$-10.59340 + 0.52034I$
$u = 1.001690 + 0.662057I$ $a = -0.632037 - 0.764776I$ $b = -0.70987 - 1.46300I$	$-9.69819 + 3.33662I$	$-10.59340 - 0.52034I$
$u = 1.021099 - 0.309250I$ $a = 0.048306 + 0.537800I$ $b = -1.15077 + 1.18839I$	$-7.02333 + 2.79209I$	$-10.65282 - 2.82685I$
$u = 1.021099 + 0.309250I$ $a = 0.048306 - 0.537800I$ $b = -1.15077 - 1.18839I$	$-7.02333 - 2.79209I$	$-10.65282 + 2.82685I$
$u = 1.052984 - 0.528704I$ $a = -0.095098 + 1.191944I$ $b = 0.51330 + 2.00122I$	$-1.83963 + 5.67513I$	$1.83097 - 12.32614I$
$u = 1.052984 + 0.528704I$ $a = -0.095098 - 1.191944I$ $b = 0.51330 - 2.00122I$	$-1.83963 - 5.67513I$	$1.83097 + 12.32614I$
$u = 1.069566 - 0.571323I$ $a = 0.394259 + 0.448579I$ $b = -0.572637 + 0.680698I$	$-7.15487 + 2.90968I$	$-8.77339 - 3.39857I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.069566 + 0.571323I$ $a = 0.394259 - 0.448579I$ $b = -0.572637 - 0.680698I$	$-7.15487 - 2.90968I$	$-8.77339 + 3.39857I$
$u = 1.42757 - 0.93579I$ $a = 0.163394 - 0.826934I$ $b = -0.67887 - 2.16422I$	$-4.02189 + 12.94079I$	$-4.13091 - 8.89362I$
$u = 1.42757 + 0.93579I$ $a = 0.163394 + 0.826934I$ $b = -0.67887 + 2.16422I$	$-4.02189 - 12.94079I$	$-4.13091 + 8.89362I$
$u = 1.44148 - 0.01984I$ $a = 0.459074 - 0.847240I$ $b = -0.41883 - 1.37506I$	$-9.62472 - 2.50943I$	$-10.21690 + 0.66180I$
$u = 1.44148 + 0.01984I$ $a = 0.459074 + 0.847240I$ $b = -0.41883 + 1.37506I$	$-9.62472 + 2.50943I$	$-10.21690 - 0.66180I$
$u = 1.44678 - 1.39596I$ $a = -0.288982 + 0.584891I$ $b = 0.55149 + 2.16776I$	$-11.29010 + 6.82846I$	$-14.0322 - 6.3990I$
$u = 1.44678 + 1.39596I$ $a = -0.288982 - 0.584891I$ $b = 0.55149 - 2.16776I$	$-11.29010 - 6.82846I$	$-14.0322 + 6.3990I$
$u = 1.46023 - 0.90075I$ $a = 0.315537 - 0.794116I$ $b = -0.70152 - 1.86561I$	$-12.93759 + 3.41499I$	$-10.10191 - 3.00232I$
$u = 1.46023 + 0.90075I$ $a = 0.315537 + 0.794116I$ $b = -0.70152 + 1.86561I$	$-12.93759 - 3.41499I$	$-10.10191 + 3.00232I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{20}+u^{19}+\cdots-u-1)(u^{89}+4u^{88}+\cdots-121118u+30299)$
c_2	$(u^{20}-u^{18}+\cdots-u-1)(u^{89}+u^{88}+\cdots+74u+3)$
c_3	$(u^{20}+7u^{19}+\cdots+26u^2-1)(u^{89}+6u^{88}+\cdots+9173u-3187)$
c_4	$(u^{20}-u^{19}+\cdots+2u+1)(u^{89}-45u^{87}+\cdots-29u-1)$
c_5	$(u^{20}+3u^{19}+\cdots-u-1)(u^{89}+5u^{87}+\cdots-1510u-191)$
c_6	$(u^{20}+4u^{18}+\cdots+3u-1)(u^{89}+u^{88}+\cdots+84u-2543)$
c_7	$(u^{20}-2u^{19}+\cdots+u-1)(u^{89}+u^{88}+\cdots+48u-59)$
c_8	$(u^{20}-3u^{19}+\cdots-3u^2+1)(u^{89}+8u^{88}+\cdots+21u+1)$
c_9	$(u^{20}+u^{19}+\cdots-2u+1)(u^{89}-45u^{87}+\cdots-29u-1)$
c_{10}	$(u^{20}+u^{19}+\cdots-2u+1)(u^{89}-45u^{87}+\cdots-29u-1)$
c_{11}	$(u^{20}+2u^{19}+\cdots-u-1)(u^{89}+u^{88}+\cdots+48u-59)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y^{20}-9y^{19}+\cdots+y+1)$ $(y^{89}+22y^{88}+\cdots-31326433005y-918029401)$
c_2	$(y^{20}-2y^{19}+\cdots+y+1)(y^{89}-7y^{88}+\cdots+1222y-9)$
c_3	$(y^{20}-3y^{19}+\cdots-52y+1)$ $(y^{89}-40y^{88}+\cdots+740124139y-10156969)$
c_4	$(y^{20}-21y^{19}+\cdots-28y+1)(y^{89}-90y^{88}+\cdots+123y-1)$
c_5	$(y^{20}+3y^{19}+\cdots+11y+1)(y^{89}+10y^{88}+\cdots-1020380y-36481)$
c_6	$(y^{20}+8y^{19}+\cdots-11y+1)$ $(y^{89}-17y^{88}+\cdots+242227806y-6466849)$
c_7, c_{11}	$(y^{20}+10y^{19}+\cdots+19y+1)(y^{89}+57y^{88}+\cdots-106492y-3481)$
c_8	$(y^{20}+y^{19}+\cdots-6y+1)(y^{89}+12y^{88}+\cdots+29y-1)$
c_9	$(y^{20}-21y^{19}+\cdots-28y+1)(y^{89}-90y^{88}+\cdots+123y-1)$
c_{10}	$(y^{20}-21y^{19}+\cdots-28y+1)(y^{89}-90y^{88}+\cdots+123y-1)$