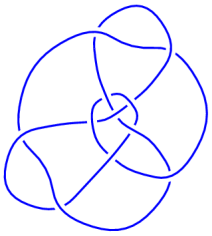
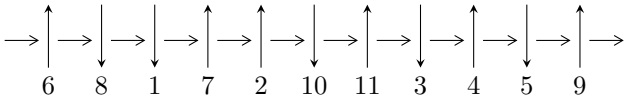
$11a_{287}$ $(K11a_{287})$



1

Arc Sequences



Solving Sequence

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

Representation Ideals

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

$I_1^u = \langle 2u^{23} + 3u^{22} + \cdots + 2u + 1,\ 2086026u^{22} + 2520765u^{21} + \cdots + 60848a - 302255,$
$466214u^{22} - 3430181u^{21} + \cdots + 121696b - 5389401\rangle$

$I_2^u = \langle 2u^{113} - u^{112} + \cdots - u + 1,\ 3.97613 \times 10^{387}u^{112} - 1.35349 \times 10^{387}u^{111} + \cdots + 2.98694 \times 10^{386}a + 4.32038 \times$
$7.70075 \times 10^{387}u^{112} - 3.85231 \times 10^{387}u^{111} + \cdots + 5.97387 \times 10^{386}b - 1.57917 \times 10^{387}\rangle$

There are 2 irreducible components with 136 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.

$\boldsymbol{I_1^u = \langle 2u^{23}+3u^{22}+\cdots+2u+1,\ 2.09\times10^6u^{22}+2.52\times10^6u^{21}+\cdots+6.08\times10^4a-3.02\times10^5,\ 4.66\times10^5u^{22}-3.43\times10^6u^{21}+\cdots+1.22\times10^5b-5.39\times10^6\rangle}$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix}-34.2826u^{22}-41.4272u^{21}+\cdots-67.3900u+4.96738\\-3.83097u^{22}+28.1865u^{21}+\cdots+43.9187u+44.2858\end{pmatrix}$$

$$a_7 = \begin{pmatrix}1.85730u^{22}+0.0981873u^{21}+\cdots+0.224864u-7.67577\\-17.9629u^{22}+7.99923u^{21}+\cdots+59.4059u+43.9659\end{pmatrix}$$

$$a_{11} = \begin{pmatrix}-34.2826u^{22}-41.4272u^{21}+\cdots-67.3900u+4.96738\\1.26984u^{22}+31.8651u^{21}+\cdots+51.0634u+39.2875\end{pmatrix}$$

$$a_8 = \begin{pmatrix}51.0910u^{22}+94.4667u^{21}+\cdots+183.901u+29.3154\\32.4405u^{22}+51.5298u^{21}+\cdots+56.9348u+3.76261\end{pmatrix}$$

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

$$a_4 = \begin{pmatrix}-8.76918u^{22}-24.8764u^{21}+\cdots-83.5901u-16.6377\\7.48212u^{22}-17.1425u^{21}+\cdots-49.1240u-31.5232\end{pmatrix}$$

$$a_3 = \begin{pmatrix}-3.35769u^{22}-27.6914u^{21}+\cdots-110.509u-30.5141\\2.96810u^{22}-16.1951u^{21}+\cdots-35.4361u-22.1979\end{pmatrix}$$

$$a_9 = \begin{pmatrix}23.0464u^{22}+66.0517u^{21}+\cdots+118.666u+41.9224\\13.3826u^{22}+27.0248u^{21}+\cdots+42.7835u+16.0846\end{pmatrix}$$

$$a_9 = \begin{pmatrix}23.0464u^{22}+66.0517u^{21}+\cdots+118.666u+41.9224\\13.3826u^{22}+27.0248u^{21}+\cdots+42.7835u+16.0846\end{pmatrix}$$

(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
$u=-1.00967$ $a=\ \ 0.646100$ $b=\ \ 0.946847$	4.08593	11.5235
$u=-0.740418-1.058967I$ $a=\ \ 1.279755+0.253431I$ $b=\ \ 0.219212+0.148183I$	$0.032703-0.467420I$	$5.82505-2.66904I$
$u=-0.740418+1.058967I$ $a=\ \ 1.279755-0.253431I$ $b=\ \ 0.219212-0.148183I$	$0.032703+0.467420I$	$5.82505+2.66904I$
$u=-0.544774-1.045687I$ $a=-0.475605+0.389224I$ $b=-0.076512+0.782354I$	$0.48442+3.74945I$	$2.31166-3.47327I$
$u=-0.544774+1.045687I$ $a=-0.475605-0.389224I$ $b=-0.076512-0.782354I$	$0.48442-3.74945I$	$2.31166+3.47327I$
$u=-0.385732-0.993312I$ $a=\ \ 0.274506+1.197616I$ $b=\ \ 0.65542+1.58150I$	$0.53356+3.30498I$	$4.54639-7.11013I$
$u=-0.385732+0.993312I$ $a=\ \ 0.274506-1.197616I$ $b=\ \ 0.65542-1.58150I$	$0.53356-3.30498I$	$4.54639+7.11013I$
$u=-0.337963-1.266672I$ $a=\ \ 0.301504+0.629452I$ $b=\ \ 0.88606+1.80103I$	$-3.98995+5.61846I$	$2.9295-15.2577I$
$u=-0.337963+1.266672I$ $a=\ \ 0.301504-0.629452I$ $b=\ \ 0.88606-1.80103I$	$-3.98995-5.61846I$	$2.9295+15.2577I$
$u=-0.189851-0.738931I$ $a=\ \ 0.787014-1.145803I$ $b=\ \ 0.21227-2.28448I$	$2.15439-0.76708I$	$0.34346-2.42258I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.189851+0.738931I$ $a=\ 0.787014+1.145803I$ $b=\ 0.21227+2.28448I$	$2.15439+0.76708I$	$0.34346+2.42258I$
$u=-0.074846-0.559580I$ $a=-0.74776+1.26862I$ $b=-0.69063+3.04610I$	$0.45628+6.29930I$	$-10.47290-7.29164I$
$u=-0.074846+0.559580I$ $a=-0.74776-1.26862I$ $b=-0.69063-3.04610I$	$0.45628-6.29930I$	$-10.47290+7.29164I$
$u=\ 0.051237-0.477997I$ $a=\ 3.10342+0.85160I$ $b=\ 0.715780+0.409505I$	$2.67620+4.28141I$	$12.68262-5.40184I$
$u=\ 0.051237+0.477997I$ $a=\ 3.10342-0.85160I$ $b=\ 0.715780-0.409505I$	$2.67620-4.28141I$	$12.68262+5.40184I$
$u=\ 0.057229-0.695931I$ $a=\ 1.29384-0.70722I$ $b=-0.946357-0.233700I$	$-0.83524-4.45780I$	$4.08352-1.73203I$
$u=\ 0.057229+0.695931I$ $a=\ 1.29384+0.70722I$ $b=-0.946357+0.233700I$	$-0.83524+4.45780I$	$4.08352+1.73203I$
$u=\ 0.461847-1.168822I$ $a=-0.672442+0.190667I$ $b=\ 0.335695+0.268400I$	$-3.50834-8.81487I$	$-3.31032+6.21747I$
$u=\ 0.461847+1.168822I$ $a=-0.672442-0.190667I$ $b=\ 0.335695-0.268400I$	$-3.50834+8.81487I$	$-3.31032-6.21747I$
$u=\ 0.648239-1.099113I$ $a=\ 0.186181-1.216347I$ $b=\ 0.65383-2.27128I$	$-1.41624-8.52463I$	$-2.57806+5.98439I$

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 0.648239 + 1.099113I$		
$a = \quad 0.186181 + 1.216347I$	$-1.41624 + 8.52463I$	$-2.57806 - 5.98439I$
$b = \quad 0.65383 + 2.27128I$		
$u = \quad 0.80986 - 1.17368I$		
$a = -0.153456 - 0.152853I$	$-1.92062 + 3.22933I$	$-4.3570 - 23.3452I$
$b = -0.438186 - 0.222512I$		
$u = \quad 0.80986 + 1.17368I$		
$a = -0.153456 + 0.152853I$	$-1.92062 - 3.22933I$	$-4.3570 + 23.3452I$
$b = -0.438186 + 0.222512I$		

II. $I_2^u = \langle 2u^{113} - u^{112} + \cdots - u + 1,\ 3.98 \times 10^{387} u^{112} - 1.35 \times 10^{387} u^{111} + \cdots + 2.99 \times 10^{386} a + 4.32 \times 10^{386},\ 7.70 \times 10^{387} u^{112} - 3.85 \times 10^{387} u^{111} + \cdots + 5.97 \times 10^{386} b - 1.58 \times 10^{387} \rangle$

(i) Arc colorings

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

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

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

$$a_{10} = \begin{pmatrix} -13.3117u^{112} + 4.53137u^{111} + \cdots - 45.7254u - 1.44643 \\ -12.8907u^{112} + 6.44860u^{111} + \cdots - 45.9121u + 2.64346 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 4.54297u^{112} - 10.0380u^{111} + \cdots + 27.3298u - 19.1038 \\ -3.83831u^{112} - 4.34038u^{111} + \cdots + 3.45298u - 16.3758 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -13.3117u^{112} + 4.53137u^{111} + \cdots - 45.7254u - 1.44643 \\ -10.6105u^{112} + 5.84963u^{111} + \cdots - 40.3185u + 3.70572 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -19.4854u^{112} - 4.14107u^{111} + \cdots - 33.3212u - 40.9462 \\ -5.67750u^{112} + 2.39415u^{111} + \cdots - 17.1045u - 2.05456 \end{pmatrix}$$

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

$$a_4 = \begin{pmatrix} 10.3070u^{112} + 6.31202u^{111} + \cdots + 13.4158u + 31.9497 \\ 12.7208u^{112} - 5.06756u^{111} + \cdots + 36.7520u + 4.55745 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 20.0364u^{112} + 4.25485u^{111} + \cdots + 39.4884u + 39.9864 \\ 10.4634u^{112} - 4.34560u^{111} + \cdots + 32.3658u + 2.95034 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.34184u^{112} - 1.41298u^{111} + \cdots - 3.52060u + 2.92614 \\ -7.91475u^{112} + 2.70472u^{111} + \cdots - 24.6052u - 2.76251 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1.34184u^{112} - 1.41298u^{111} + \cdots - 3.52060u + 2.92614 \\ -7.91475u^{112} + 2.70472u^{111} + \cdots - 24.6052u - 2.76251 \end{pmatrix}$$

(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
$u=-1.30320$ $a=-0.0203171$ $b=\ \ 0.494576$	1.59308	11.0904
$u=-1.262317-0.351158I$ $a=-0.951055-0.450391I$ $b=\ \ 0.0004496+0.0428210I$	$0.30457-12.45934I$	$0.53631+8.20115I$
$u=-1.262317+0.351158I$ $a=-0.951055+0.450391I$ $b=\ \ 0.0004496-0.0428210I$	$0.30457+12.45934I$	$0.53631-8.20115I$
$u=-1.011084-0.177294I$ $a=\ \ 0.332970-0.773081I$ $b=\ \ 0.1090099+0.0446566I$	$4.33591+1.94022I$	$10.12299-4.72509I$
$u=-1.011084+0.177294I$ $a=\ \ 0.332970+0.773081I$ $b=\ \ 0.1090099-0.0446566I$	$4.33591-1.94022I$	$10.12299+4.72509I$
$u=-0.82066-1.38978I$ $a=\ \ 0.235053+1.072623I$ $b=\ \ 0.47544+2.07880I$	$-2.41977+9.88740I$	$-1.97190-11.09940I$
$u=-0.82066+1.38978I$ $a=\ \ 0.235053-1.072623I$ $b=\ \ 0.47544-2.07880I$	$-2.41977-9.88740I$	$-1.97190+11.09940I$
$u=-0.775398-1.030392I$ $a=\ \ 1.240647-0.047828I$ $b=\ \ 0.232930-0.319863I$	$-0.924328-0.718307I$	$-1.94764+0.11909I$
$u=-0.775398+1.030392I$ $a=\ \ 1.240647+0.047828I$ $b=\ \ 0.232930+0.319863I$	$-0.924328+0.718307I$	$-1.94764-0.11909I$
$u=-0.747558-0.545342I$ $a=\ \ 0.563679+0.782916I$ $b=\ \ 0.451467-0.064062I$	$1.06057+2.55166I$	$7.66821-4.31540I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.747558+0.545342I$ $a=\ \ 0.563679-0.782916I$ $b=\ \ 0.451467+0.064062I$	$1.06057-2.55166I$	$7.66821+4.31540I$
$u=-0.72718-1.28509I$ $a=-0.071595-0.273653I$ $b=-0.267279-0.660331I$	$0.60416+4.29525I$	$7.2577-21.0892I$
$u=-0.72718+1.28509I$ $a=-0.071595+0.273653I$ $b=-0.267279+0.660331I$	$0.60416-4.29525I$	$7.2577+21.0892I$
$u=-0.719767-0.400346I$ $a=\ \ 0.110861-0.386646I$ $b=-0.234594+1.028463I$	$-1.94317+5.18262I$	$-2.92406-5.86659I$
$u=-0.719767+0.400346I$ $a=\ \ 0.110861+0.386646I$ $b=-0.234594-1.028463I$	$-1.94317-5.18262I$	$-2.92406+5.86659I$
$u=-0.70399-1.30576I$ $a=-0.295939-1.100433I$ $b=-0.64232-2.19124I$	$-2.7940+19.3323I$	$-0.99959-10.13657I$
$u=-0.70399+1.30576I$ $a=-0.295939+1.100433I$ $b=-0.64232+2.19124I$	$-2.7940-19.3323I$	$-0.99959+10.13657I$
$u=-0.581199-0.356897I$ $a=-0.91328+1.40503I$ $b=\ \ 0.19307+2.07546I$	$0.85923+5.91858I$	$5.61059-8.27350I$
$u=-0.581199+0.356897I$ $a=-0.91328-1.40503I$ $b=\ \ 0.19307-2.07546I$	$0.85923-5.91858I$	$5.61059+8.27350I$
$u=-0.539821-1.216613I$ $a=\ \ 0.176423+0.367096I$ $b=-0.600669+1.158207I$	$-4.56702+0.00108I$	$-5.39283+2.60077I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.539821+1.216613I$ $a=\ 0.176423-0.367096I$ $b=-0.600669-1.158207I$	$-4.56702-0.00108I$	$-5.39283-2.60077I$
$u=-0.534017-0.425702I$ $a=\ 1.35672+0.92067I$ $b=\ 0.721823+0.009977I$	$1.74471+1.66244I$	$6.56131-5.03533I$
$u=-0.534017+0.425702I$ $a=\ 1.35672-0.92067I$ $b=\ 0.721823-0.009977I$	$1.74471-1.66244I$	$6.56131+5.03533I$
$u=-0.512742-0.995656I$ $a=\ 0.257563+1.230677I$ $b=\ 0.54812+1.65369I$	$0.27761+2.60385I$	$1.05814+2.98059I$
$u=-0.512742+0.995656I$ $a=\ 0.257563-1.230677I$ $b=\ 0.54812-1.65369I$	$0.27761-2.60385I$	$1.05814-2.98059I$
$u=-0.507447-0.994872I$ $a=\ 0.239930+0.754961I$ $b=\ 0.337439+1.046998I$	$-0.08514+2.26722I$	$2.14871-2.34962I$
$u=-0.507447+0.994872I$ $a=\ 0.239930-0.754961I$ $b=\ 0.337439-1.046998I$	$-0.08514-2.26722I$	$2.14871+2.34962I$
$u=-0.444194-0.995792I$ $a=-1.54994+0.84798I$ $b=-1.12898+1.35020I$	$0.77911+4.56765I$	$5.60045-12.62487I$
$u=-0.444194+0.995792I$ $a=-1.54994-0.84798I$ $b=-1.12898-1.35020I$	$0.77911-4.56765I$	$5.60045+12.62487I$
$u=-0.432358-1.286453I$ $a=-0.232324-0.444648I$ $b=-0.51369-1.55768I$	$-3.24602+5.27863I$	$4.83600-8.50313I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.432358+1.286453I$ $a=-0.232324+0.444648I$ $b=-0.51369+1.55768I$	$-3.24602-5.27863I$	$4.83600+8.50313I$
$u=-0.404531-1.154114I$ $a=-0.145304+0.827225I$ $b=0.85780+2.09611I$	$-5.60691+8.43739I$	$-7.12087-9.85042I$
$u=-0.404531+1.154114I$ $a=-0.145304-0.827225I$ $b=0.85780-2.09611I$	$-5.60691-8.43739I$	$-7.12087+9.85042I$
$u=-0.399961-1.184293I$ $a=-0.510038-0.380111I$ $b=1.29335-1.11540I$	$-2.84578+9.33184I$	$4.89180-13.18617I$
$u=-0.399961+1.184293I$ $a=-0.510038+0.380111I$ $b=1.29335+1.11540I$	$-2.84578-9.33184I$	$4.89180+13.18617I$
$u=-0.352320-1.168101I$ $a=0.476201+1.116323I$ $b=1.00408+1.95102I$	$-0.20907+5.85551I$	$2.58609-5.18738I$
$u=-0.352320+1.168101I$ $a=0.476201-1.116323I$ $b=1.00408-1.95102I$	$-0.20907-5.85551I$	$2.58609+5.18738I$
$u=-0.316184-0.495357I$ $a=0.87181+1.25717I$ $b=0.044072+0.562827I$	$0.32682+1.54414I$	$1.18555-4.51766I$
$u=-0.316184+0.495357I$ $a=0.87181-1.25717I$ $b=0.044072-0.562827I$	$0.32682-1.54414I$	$1.18555+4.51766I$
$u=-0.315795-1.245831I$ $a=-0.384150-0.658955I$ $b=-0.97533-1.88645I$	$-4.25106+5.49372I$	$-21.7867-4.7523I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.315795+1.245831I$ $a=-0.384150+0.658955I$ $b=-0.97533+1.88645I$	$-4.25106-5.49372I$	$-21.7867+4.7523I$
$u=-0.293401-0.956315I$ $a=\ \ 0.965850+0.765626I$ $b=\ \ 0.080769+1.258163I$	$-0.008867+1.193897I$	$1.68777-2.50795I$
$u=-0.293401+0.956315I$ $a=\ \ 0.965850-0.765626I$ $b=\ \ 0.080769-1.258163I$	$-0.008867-1.193897I$	$1.68777+2.50795I$
$u=-0.273296-1.079569I$ $a=-0.746197-0.967845I$ $b=-0.90393-2.03339I$	$-3.18843+2.99503I$	$-7.80458-1.91030I$
$u=-0.273296+1.079569I$ $a=-0.746197+0.967845I$ $b=-0.90393+2.03339I$	$-3.18843-2.99503I$	$-7.80458+1.91030I$
$u=-0.264254-0.080519I$ $a=\ \ 2.89776-1.78297I$ $b=\ \ 0.52777-1.31470I$	$2.57797-1.20400I$	$5.18082+3.22683I$
$u=-0.264254+0.080519I$ $a=\ \ 2.89776+1.78297I$ $b=\ \ 0.52777+1.31470I$	$2.57797+1.20400I$	$5.18082-3.22683I$
$u=-0.096180-0.606963I$ $a=\ \ 0.62098-2.52167I$ $b=\ \ 0.70317-2.28172I$	$2.43152-1.27971I$	$7.88421+7.51636I$
$u=-0.096180+0.606963I$ $a=\ \ 0.62098+2.52167I$ $b=\ \ 0.70317+2.28172I$	$2.43152+1.27971I$	$7.88421-7.51636I$
$u=-0.082891-0.825004I$ $a=-1.69823-0.20651I$ $b=-0.453601-0.942486I$	$-1.76778-1.45774I$	$-6.90510+2.88198I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.082891+0.825004I$ $a=-1.69823+0.20651I$ $b=-0.453601+0.942486I$	$-1.76778+1.45774I$	$-6.90510-2.88198I$
$u=-0.028844-0.755252I$ $a=2.10465-0.64708I$ $b=0.478014-0.329673I$	$2.17253-4.26318I$	$-3.96305+4.20723I$
$u=-0.028844+0.755252I$ $a=2.10465+0.64708I$ $b=0.478014+0.329673I$	$2.17253+4.26318I$	$-3.96305-4.20723I$
$u=0.02667-1.66030I$ $a=0.158969-0.743795I$ $b=0.36582-1.51467I$	$-7.61228-7.01373I$	$-6.03475+6.82564I$
$u=0.02667+1.66030I$ $a=0.158969+0.743795I$ $b=0.36582+1.51467I$	$-7.61228+7.01373I$	$-6.03475-6.82564I$
$u=0.027582-0.425677I$ $a=1.55282-1.80923I$ $b=-0.92979-1.09079I$	$-2.63280-5.54865I$	$-4.97651+7.85005I$
$u=0.027582+0.425677I$ $a=1.55282+1.80923I$ $b=-0.92979+1.09079I$	$-2.63280+5.54865I$	$-4.97651-7.85005I$
$u=0.039009-1.372178I$ $a=-0.293988+0.942214I$ $b=-0.59078+1.76436I$	$-9.63102+0.79191I$	$-7.50956-0.06431I$
$u=0.039009+1.372178I$ $a=-0.293988-0.942214I$ $b=-0.59078-1.76436I$	$-9.63102-0.79191I$	$-7.50956+0.06431I$
$u=0.056422-0.405099I$ $a=3.13495+0.24338I$ $b=0.994162+0.527313I$	$1.89966+1.86803I$	$7.73026-3.63693I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.056422 + 0.405099I$ $a = 3.13495 - 0.24338I$ $b = 0.994162 - 0.527313I$	$1.89966 - 1.86803I$	$7.73026 + 3.63693I$
$u = 0.109658 - 0.807035I$ $a = -1.150357 + 0.514943I$ $b = 0.943073 - 0.030072I$	$-1.03172 - 4.75606I$	$-8.4145 + 16.6529I$
$u = 0.109658 + 0.807035I$ $a = -1.150357 - 0.514943I$ $b = 0.943073 + 0.030072I$	$-1.03172 + 4.75606I$	$-8.4145 - 16.6529I$
$u = 0.16287 - 1.52564I$ $a = 1.222399 + 0.151916I$ $b = 0.164337 + 0.300729I$	$-0.437960 + 0.283875I$	$-0.36237 + 7.09511I$
$u = 0.16287 + 1.52564I$ $a = 1.222399 - 0.151916I$ $b = 0.164337 - 0.300729I$	$-0.437960 - 0.283875I$	$-0.36237 - 7.09511I$
$u = 0.164322 - 0.168798I$ $a = 1.43866 + 4.02145I$ $b = -0.77948 + 2.35955I$	$0.84575 + 6.19088I$	$9.11415 - 2.51135I$
$u = 0.164322 + 0.168798I$ $a = 1.43866 - 4.02145I$ $b = -0.77948 - 2.35955I$	$0.84575 - 6.19088I$	$9.11415 + 2.51135I$
$u = 0.207471 - 1.324644I$ $a = 0.355309 + 0.310988I$ $b = 0.526418 + 0.749713I$	$-1.10860 + 3.44185I$	$-2.14071 - 11.43318I$
$u = 0.207471 + 1.324644I$ $a = 0.355309 - 0.310988I$ $b = 0.526418 - 0.749713I$	$-1.10860 - 3.44185I$	$-2.14071 + 11.43318I$
$u = 0.261410 - 0.979480I$ $a = -0.214493 - 0.321676I$ $b = -0.91634 - 1.20777I$	$-3.02719 + 0.97268I$	$-7.39513 - 1.74680I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.261410 + 0.979480I$ $a = -0.214493 + 0.321676I$ $b = -0.91634 + 1.20777I$	$-3.02719 - 0.97268I$	$-7.39513 + 1.74680I$
$u = 0.278509 - 0.742584I$ $a = -0.270927 + 0.102673I$ $b = -0.49798 + 2.37808I$	$2.84015 + 0.51393I$	$12.58213 + 2.35555I$
$u = 0.278509 + 0.742584I$ $a = -0.270927 - 0.102673I$ $b = -0.49798 - 2.37808I$	$2.84015 - 0.51393I$	$12.58213 - 2.35555I$
$u = 0.343361 - 0.849667I$ $a = -0.764002 + 0.359233I$ $b = 1.34294 + 0.47001I$	$2.44577 - 3.54875I$	$9.76172 + 7.20186I$
$u = 0.343361 + 0.849667I$ $a = -0.764002 - 0.359233I$ $b = 1.34294 - 0.47001I$	$2.44577 + 3.54875I$	$9.76172 - 7.20186I$
$u = 0.389641 - 0.580070I$ $a = 0.686603 - 0.431507I$ $b = 0.43083 - 2.63721I$	$0.96565 - 6.44634I$	$7.5932 + 12.8465I$
$u = 0.389641 + 0.580070I$ $a = 0.686603 + 0.431507I$ $b = 0.43083 + 2.63721I$	$0.96565 + 6.44634I$	$7.5932 - 12.8465I$
$u = 0.398690 - 0.913231I$ $a = -0.224793 - 0.354273I$ $b = -0.872216 - 0.093496I$	$-1.96157 + 2.61364I$	$0.166191 - 0.612318I$
$u = 0.398690 + 0.913231I$ $a = -0.224793 + 0.354273I$ $b = -0.872216 + 0.093496I$	$-1.96157 - 2.61364I$	$0.166191 + 0.612318I$
$u = 0.414004 - 1.196833I$ $a = 0.28989 - 1.44227I$ $b = 0.52986 - 1.84848I$	$-1.27433 - 4.55739I$	$1.57630 + 4.72702I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.414004 + 1.196833I$ $a = 0.28989 + 1.44227I$ $b = 0.52986 + 1.84848I$	$-1.27433 + 4.55739I$	$1.57630 - 4.72702I$
$u = 0.416542 - 1.156759I$ $a = -1.75960 - 0.42509I$ $b = -1.133259 - 0.812724I$	$-2.10342 - 9.54747I$	$3.22972 + 10.40754I$
$u = 0.416542 + 1.156759I$ $a = -1.75960 + 0.42509I$ $b = -1.133259 + 0.812724I$	$-2.10342 + 9.54747I$	$3.22972 - 10.40754I$
$u = 0.443663 - 1.201275I$ $a = -0.062288 - 0.853366I$ $b = 0.08137 - 2.05586I$	$-5.82093 - 4.49340I$	$-7.29363 + 3.04833I$
$u = 0.443663 + 1.201275I$ $a = -0.062288 + 0.853366I$ $b = 0.08137 + 2.05586I$	$-5.82093 + 4.49340I$	$-7.29363 - 3.04833I$
$u = 0.467663 - 1.239346I$ $a = 0.507407 + 0.866708I$ $b = 0.462286 + 1.223590I$	$-6.01029 + 1.27408I$	$-6.17679 - 1.96046I$
$u = 0.467663 + 1.239346I$ $a = 0.507407 - 0.866708I$ $b = 0.462286 - 1.223590I$	$-6.01029 - 1.27408I$	$-6.17679 + 1.96046I$
$u = 0.469466 - 1.187144I$ $a = -0.65356 + 1.36840I$ $b = -0.71212 + 2.19402I$	$-6.01052 - 10.10664I$	$-5.36294 + 10.01585I$
$u = 0.469466 + 1.187144I$ $a = -0.65356 - 1.36840I$ $b = -0.71212 - 2.19402I$	$-6.01052 + 10.10664I$	$-5.36294 - 10.01585I$
$u = 0.510287 - 0.646689I$ $a = 1.195890 - 0.156688I$ $b = -0.529608 + 0.163513I$	$0.65851 + 2.05062I$	$3.31789 - 4.97390I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.510287 + 0.646689I$ $a = 1.195890 + 0.156688I$ $b = -0.529608 - 0.163513I$	$0.65851 - 2.05062I$	$3.31789 + 4.97390I$
$u = 0.528464 - 1.084368I$ $a = 0.201064 - 1.319211I$ $b = 0.82633 - 2.30591I$	$-0.96954 - 9.16972I$	$3.1091 + 14.4636I$
$u = 0.528464 + 1.084368I$ $a = 0.201064 + 1.319211I$ $b = 0.82633 + 2.30591I$	$-0.96954 + 9.16972I$	$3.1091 - 14.4636I$
$u = 0.597381 - 1.217771I$ $a = -0.399731 + 1.034690I$ $b = -0.76174 + 2.19006I$	$1.47459 - 12.88884I$	$1.59233 + 9.26231I$
$u = 0.597381 + 1.217771I$ $a = -0.399731 - 1.034690I$ $b = -0.76174 - 2.19006I$	$1.47459 + 12.88884I$	$1.59233 - 9.26231I$
$u = 0.620749 - 0.410184I$ $a = 1.71835 - 0.54894I$ $b = 0.222329 + 0.403963I$	$1.02491 + 4.61907I$	$2.57822 - 5.07818I$
$u = 0.620749 + 0.410184I$ $a = 1.71835 + 0.54894I$ $b = 0.222329 - 0.403963I$	$1.02491 - 4.61907I$	$2.57822 + 5.07818I$
$u = 0.640385 - 0.010959I$ $a = -1.29747 - 1.44275I$ $b = -0.553158 - 0.550262I$	$-2.75102 - 5.82060I$	$-2.85183 + 7.11584I$
$u = 0.640385 + 0.010959I$ $a = -1.29747 + 1.44275I$ $b = -0.553158 + 0.550262I$	$-2.75102 + 5.82060I$	$-2.85183 - 7.11584I$
$u = 0.662005 - 1.116092I$ $a = 0.002766 - 0.642537I$ $b = -0.184184 - 1.341595I$	$-4.62375 - 4.40801I$	$-5.05338 + 5.16011I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.662005 + 1.116092I$ $a = 0.002766 + 0.642537I$ $b = -0.184184 + 1.341595I$	$-4.62375 + 4.40801I$	$-5.05338 - 5.16011I$
$u = 0.673006 - 0.074433I$ $a = 0.984074 + 0.306850I$ $b = -0.214130 - 0.158065I$	$-2.25095 - 0.34651I$	$-3.89202 + 0.28438I$
$u = 0.673006 + 0.074433I$ $a = 0.984074 - 0.306850I$ $b = -0.214130 + 0.158065I$	$-2.25095 + 0.34651I$	$-3.89202 - 0.28438I$
$u = 0.683885 - 1.088740I$ $a = 0.252165 - 1.014707I$ $b = 0.60385 - 2.23652I$	$-0.20369 - 7.33727I$	$2.13817 + 5.74649I$
$u = 0.683885 + 1.088740I$ $a = 0.252165 + 1.014707I$ $b = 0.60385 + 2.23652I$	$-0.20369 + 7.33727I$	$2.13817 - 5.74649I$
$u = 0.81169 - 1.29137I$ $a = -0.137501 + 0.539741I$ $b = -0.280253 + 1.010804I$	$-3.65352 - 10.75528I$	$-1.01523 + 11.33579I$
$u = 0.81169 + 1.29137I$ $a = -0.137501 - 0.539741I$ $b = -0.280253 - 1.010804I$	$-3.65352 + 10.75528I$	$-1.01523 - 11.33579I$
$u = 0.962471 - 0.291633I$ $a = -1.013237 + 0.758672I$ $b = 0.0787440 + 0.0663360I$	$4.35158 + 7.22979I$	$5.67264 - 6.09630I$
$u = 0.962471 + 0.291633I$ $a = -1.013237 - 0.758672I$ $b = 0.0787440 - 0.0663360I$	$4.35158 - 7.22979I$	$5.67264 + 6.09630I$
$u = 1.02616 - 1.01346I$ $a = -0.164992 - 0.216477I$ $b = -0.0603824 - 0.1100638I$	$-1.98954 + 3.03315I$	$-16.8949 + 11.2068I$

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \quad 1.02616 + 1.01346I$ $a = -0.164992 + 0.216477I$ $b = -0.0603824 + 0.1100638I$	$-1.98954 - 3.03315I$	$-16.8949 - 11.2068I$
$u = \quad 1.18497$ $a = \quad 0.682829$ $b = \quad 0.744416$	3.14087	2.53233
$u = \quad 2.12615$ $a = \quad 0.842656$ $b = -0.0296276$	0.212503	-40.7301

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(2u^{23}+3u^{22}+\cdots+2u+1)(2u^{113}+u^{112}+\cdots-u-1)$
c_2	$(u^{23}-3u^{22}+\cdots+5u-1)(u^{113}+2u^{112}+\cdots-3534u-4993)$
c_3	$(u^{23}+8u^{22}+\cdots+5u-4)(u^{113}+3u^{112}+\cdots-1271u-44)$
c_4	$(u^{23}+4u^{20}+\cdots+5u+1)(u^{113}+13u^{112}+\cdots-4u-1)$
c_5	$(2u^{23}-3u^{22}+\cdots+2u-1)(2u^{113}+u^{112}+\cdots-u-1)$
c_6	$(2u^{23}-7u^{22}+\cdots+3u+1)(2u^{113}+17u^{112}+\cdots+38u-1)$
c_7	$(u^{23}-2u^{22}+\cdots+21u+2)(u^{113}+u^{112}+\cdots-34861u+12214)$
c_8	$(u^{23}+3u^{22}+\cdots+5u+1)(u^{113}+2u^{112}+\cdots-3534u-4993)$
c_9	$(u^{23}-u^{22}+\cdots-32u+8)(u^{113}+2u^{112}+\cdots+26104u+13016)$
c_{10}	$(2u^{23}+u^{22}+\cdots+4u+1)(2u^{113}+3u^{112}+\cdots+23u+1)$
c_{11}	$(4u^{23}-39u^{22}+\cdots-u-1)(4u^{113}+35u^{112}+\cdots+12u-1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(4y^{23}+59y^{22}+\cdots-26y-1)(4y^{113}+255y^{112}+\cdots-31y-1)$
c_2	$(y^{23}-19y^{22}+\cdots+17y-1)$ $(y^{113}-78y^{112}+\cdots+591816960y-24930049)$
c_3	$(y^{23}+2y^{21}+\cdots-79y-16)(y^{113}-11y^{112}+\cdots+228913y-1936)$
c_4	$(y^{23}+6y^{21}+\cdots+11y-1)(y^{113}-11y^{112}+\cdots-158y-1)$
c_6	$(4y^{23}+43y^{22}+\cdots+3y-1)(4y^{113}+47y^{112}+\cdots+270y-1)$
c_7	$(y^{23}-10y^{22}+\cdots+61y-4)$ $(y^{113}-25y^{112}+\cdots+4911099153y-149181796)$
c_8	$(y^{23}-19y^{22}+\cdots+17y-1)$ $(y^{113}-78y^{112}+\cdots+591816960y-24930049)$
c_9	$(y^{23}-19y^{22}+\cdots+320y-64)$ $(y^{113}-46y^{112}+\cdots+1585145728y-169416256)$
c_{10}	$(4y^{23}+15y^{22}+\cdots+24y-1)(4y^{113}+3y^{112}+\cdots+1415y-1)$
c_{11}	$(16y^{23}+23y^{22}+\cdots+15y-1)(112y^{113}-2639y^{112}+\cdots-14y-7)$