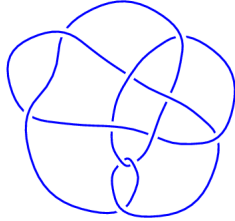
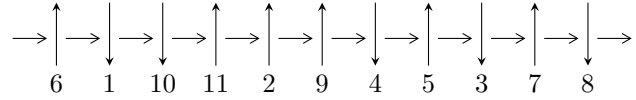


11a₁₆₄ (K11a₁₆₄)

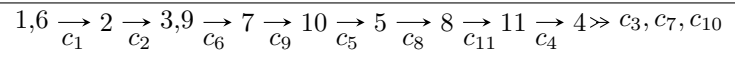


1

Arc Sequences



Solving Sequence



Representation Ideals

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

$$I_1^u = \langle u^{17} - u^{16} + \dots + 2u + 1, 4u^{16} - 3u^{15} + \dots + b - 2, -5u^{16} - 2u^{15} + \dots + a - 3 \rangle$$

$$I_2^u = \langle u^{101} + 24u^{99} + \dots + 10u - 1, \\ 5.35626 \times 10^{142} u^{100} + 1.51898 \times 10^{143} u^{99} + \dots + 2.96438 \times 10^{142} a + 1.81654 \times 10^{143}, \\ 1.18170 \times 10^{143} u^{100} - 1.21791 \times 10^{143} u^{99} + \dots + 2.96438 \times 10^{142} b + 9.66050 \times 10^{141} \rangle$$

There are 2 irreducible components with 118 representations.

¹The knot diagram image is adapter from “C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, <http://www.indiana.edu/~knotinfo>”

$$I_1^u = \langle u^{17} - u^{16} + \dots + 2u + 1, 4u^{16} - 3u^{15} + \dots + b - 2, -5u^{16} - 2u^{15} + \dots + a - 3 \rangle$$

I.

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} 5u^{16} + 2u^{15} + \dots + 14u + 3 \\ -4u^{16} + 3u^{15} + \dots + 2u + 2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -8u^{16} + 6u^{15} + \dots - 3u + 2 \\ 6u^{16} - 13u^{15} + \dots - 22u - 11 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 8u^{16} - u^{15} + \dots + 13u + 2 \\ -5u^{16} + 9u^{15} + \dots + 14u + 7 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 5u^{16} + u^{15} + \dots + 11u + 2 \\ -4u^{16} + 4u^{15} + \dots + 3u + 2 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -5u^{16} - u^{15} + \dots - 12u - 3 \\ 6u^{16} - 8u^{15} + \dots - 9u - 7 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{16} + 4u^{14} + \dots + 6u^3 + 3u^2 \\ -3u^{16} - 14u^{14} + \dots - 7u - 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u^{16} + 4u^{14} + \dots + 6u^3 + 3u^2 \\ -3u^{16} - 14u^{14} + \dots - 7u - 1 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.531255 - 1.079228I$ $a = -0.690140 + 0.619649I$ $b = 1.49925 + 0.03208I$	$1.15760 + 3.69823I$	$4.44640 - 3.84774I$
$u = -0.531255 + 1.079228I$ $a = -0.690140 - 0.619649I$ $b = 1.49925 - 0.03208I$	$1.15760 - 3.69823I$	$4.44640 + 3.84774I$
$u = -0.470497 - 0.542589I$ $a = -1.07909 + 1.58508I$ $b = 0.707576 + 0.555508I$	$2.92806 + 0.53275I$	$4.91516 - 7.33319I$
$u = -0.470497 + 0.542589I$ $a = -1.07909 - 1.58508I$ $b = 0.707576 - 0.555508I$	$2.92806 - 0.53275I$	$4.91516 + 7.33319I$
$u = -0.445787$ $a = -0.992899$ $b = -0.981462$	-1.61086	4.91656
$u = -0.398186 - 0.863724I$ $a = 0.260328 - 0.102214I$ $b = -2.79217 - 0.92236I$	$-1.97020 + 1.69791I$	$27.8669 + 58.1541I$
$u = -0.398186 + 0.863724I$ $a = 0.260328 + 0.102214I$ $b = -2.79217 + 0.92236I$	$-1.97020 - 1.69791I$	$27.8669 - 58.1541I$
$u = 0.04437 - 1.47962I$ $a = -0.284723 + 0.176030I$ $b = -0.370779 - 0.051896I$	$-7.74398 + 1.02960I$	$7.41611 - 9.53632I$
$u = 0.04437 + 1.47962I$ $a = -0.284723 - 0.176030I$ $b = -0.370779 + 0.051896I$	$-7.74398 - 1.02960I$	$7.41611 + 9.53632I$
$u = 0.270408 - 0.962092I$ $a = 1.27769 - 1.09204I$ $b = 1.035411 + 0.429375I$	$-4.89729 - 5.84133I$	$-3.35810 + 6.50497I$

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.270408 + 0.962092I$		
$a = 1.27769 + 1.09204I$	$-4.89729 + 5.84133I$	$-3.35810 - 6.50497I$
$b = 1.035411 - 0.429375I$		
$u = 0.291654 - 0.910275I$		
$a = -2.06921 + 0.38620I$	$-4.74843 + 3.51454I$	$-6.20887 - 3.24977I$
$b = 1.32384 - 1.52416I$		
$u = 0.291654 + 0.910275I$		
$a = -2.06921 - 0.38620I$	$-4.74843 - 3.51454I$	$-6.20887 + 3.24977I$
$b = 1.32384 + 1.52416I$		
$u = 0.644274 - 1.068716I$		
$a = 1.409191 + 0.052835I$	$-1.81180 - 9.05017I$	$-2.80055 + 9.33425I$
$b = -1.33644 + 1.77334I$		
$u = 0.644274 + 1.068716I$		
$a = 1.409191 - 0.052835I$	$-1.81180 + 9.05017I$	$-2.80055 - 9.33425I$
$b = -1.33644 - 1.77334I$		
$u = 0.872126 - 0.553676I$		
$a = 0.172400 + 1.195717I$	$-0.20281 + 3.45742I$	$-0.73533 - 6.43168I$
$b = -1.075945 - 0.785451I$		
$u = 0.872126 + 0.553676I$		
$a = 0.172400 - 1.195717I$	$-0.20281 - 3.45742I$	$-0.73533 + 6.43168I$
$b = -1.075945 + 0.785451I$		

$$\text{II. } I_2^u = \langle u^{101} + 24u^{99} + \dots + 10u - 1, 5.36 \times 10^{142}u^{100} + 1.52 \times 10^{143}u^{99} + \dots + 2.96 \times 10^{142}a + 1.82 \times 10^{143}, 1.18 \times 10^{143}u^{100} - 1.22 \times 10^{143}u^{99} + \dots + 2.96 \times 10^{142}b + 9.66 \times 10^{141} \rangle$$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

$$a_9 = \begin{pmatrix} -1.80687u^{100} - 5.12411u^{99} + \dots - 54.4252u - 6.12790 \\ -3.98632u^{100} + 4.10847u^{99} + \dots + 16.9138u - 0.325886 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 5.41431u^{100} - 3.07737u^{99} + \dots - 63.2475u + 20.0253 \\ -3.98698u^{100} + 1.36801u^{99} + \dots - 13.1504u + 1.28674 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.326465u^{100} - 7.10067u^{99} + \dots - 53.0968u - 7.00096 \\ -5.66003u^{100} + 3.87044u^{99} + \dots - 5.69168u + 1.88870 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -u \\ u^3 + u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.41385u^{100} - 4.88469u^{99} + \dots - 49.0932u - 6.43422 \\ -3.66544u^{100} + 3.39853u^{99} + \dots + 13.5829u - 0.258983 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.362307u^{100} + 4.62116u^{99} + \dots + 74.2100u - 0.853931 \\ 4.70354u^{100} - 1.63592u^{99} + \dots + 21.5306u - 2.83028 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4.88360u^{100} - 4.78717u^{99} + \dots - 29.1107u - 1.88525 \\ -2.47649u^{100} - 0.756316u^{99} + \dots - 27.7775u + 3.18401 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 4.88360u^{100} - 4.78717u^{99} + \dots - 29.1107u - 1.88525 \\ -2.47649u^{100} - 0.756316u^{99} + \dots - 27.7775u + 3.18401 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.006782 - 0.413097I$ $a = 0.460509 - 0.917610I$ $b = -0.961426 + 0.585120I$	$-1.20543 - 2.91368I$	$-5.17257 + 4.42091I$
$u = -1.006782 + 0.413097I$ $a = 0.460509 + 0.917610I$ $b = -0.961426 - 0.585120I$	$-1.20543 + 2.91368I$	$-5.17257 - 4.42091I$
$u = -0.920784 - 0.379494I$ $a = -0.81119 + 1.39567I$ $b = 1.49974 - 0.54093I$	$-0.83041 - 12.65940I$	$1.32294 + 6.80794I$
$u = -0.920784 + 0.379494I$ $a = -0.81119 - 1.39567I$ $b = 1.49974 + 0.54093I$	$-0.83041 + 12.65940I$	$1.32294 - 6.80794I$
$u = -0.834355 - 0.503525I$ $a = -0.966842 + 0.510915I$ $b = 1.090717 + 0.410426I$	$3.71124 + 3.14543I$	$6.11832 - 6.02177I$
$u = -0.834355 + 0.503525I$ $a = -0.966842 - 0.510915I$ $b = 1.090717 - 0.410426I$	$3.71124 - 3.14543I$	$6.11832 + 6.02177I$
$u = -0.799338 - 0.603896I$ $a = 0.35785 - 1.48751I$ $b = -1.45382 + 0.92122I$	$0.67147 - 3.20721I$	$8.00406 + 3.52092I$
$u = -0.799338 + 0.603896I$ $a = 0.35785 + 1.48751I$ $b = -1.45382 - 0.92122I$	$0.67147 + 3.20721I$	$8.00406 - 3.52092I$
$u = -0.686788 - 0.515849I$ $a = 0.948875 - 0.341468I$ $b = -0.101745 - 0.652517I$	$2.01265 + 1.89682I$	$4.30766 - 6.27576I$
$u = -0.686788 + 0.515849I$ $a = 0.948875 + 0.341468I$ $b = -0.101745 + 0.652517I$	$2.01265 - 1.89682I$	$4.30766 + 6.27576I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.671042 - 1.184580I$ $a = 1.015902 - 0.247709I$ $b = -1.24440 - 1.14797I$	$-3.60655 + 8.97192I$	$-5.37848 - 8.59790I$
$u = -0.671042 + 1.184580I$ $a = 1.015902 + 0.247709I$ $b = -1.24440 + 1.14797I$	$-3.60655 - 8.97192I$	$-5.37848 + 8.59790I$
$u = -0.669864 - 1.077587I$ $a = -0.559695 + 0.546515I$ $b = 1.318581 + 0.428757I$	$1.99749 + 2.44731I$	$5.22510 + 1.11999I$
$u = -0.669864 + 1.077587I$ $a = -0.559695 - 0.546515I$ $b = 1.318581 - 0.428757I$	$1.99749 - 2.44731I$	$5.22510 - 1.11999I$
$u = -0.649014 - 1.032625I$ $a = 1.58885 - 0.36861I$ $b = -1.56195 - 1.75641I$	$-0.65204 + 8.65062I$	$4.78930 - 7.79787I$
$u = -0.649014 + 1.032625I$ $a = 1.58885 + 0.36861I$ $b = -1.56195 + 1.75641I$	$-0.65204 - 8.65062I$	$4.78930 + 7.79787I$
$u = -0.637940 - 1.164237I$ $a = -1.315932 + 0.484024I$ $b = 1.94306 + 1.40261I$	$-3.2128 + 18.3585I$	$-1.28598 - 10.19489I$
$u = -0.637940 + 1.164237I$ $a = -1.315932 - 0.484024I$ $b = 1.94306 - 1.40261I$	$-3.2128 - 18.3585I$	$-1.28598 + 10.19489I$
$u = -0.614599 - 0.687148I$ $a = -0.143593 + 0.504789I$ $b = 0.478835 + 0.730752I$	$0.44573 + 1.61901I$	$-0.65586 - 6.33197I$
$u = -0.614599 + 0.687148I$ $a = -0.143593 - 0.504789I$ $b = 0.478835 - 0.730752I$	$0.44573 - 1.61901I$	$-0.65586 + 6.33197I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.571043 - 0.979201I$ $a = -0.580617 - 0.026343I$ $b = 1.61120 + 0.54734I$	$-0.50863 + 3.05407I$	$-5.15765 + 2.96712I$
$u = -0.571043 + 0.979201I$ $a = -0.580617 + 0.026343I$ $b = 1.61120 - 0.54734I$	$-0.50863 - 3.05407I$	$-5.15765 - 2.96712I$
$u = -0.570744 - 0.452507I$ $a = 0.83305 - 1.62616I$ $b = -0.584755 - 0.446223I$	$2.96660 - 0.49089I$	$7.55238 + 2.16583I$
$u = -0.570744 + 0.452507I$ $a = 0.83305 + 1.62616I$ $b = -0.584755 + 0.446223I$	$2.96660 + 0.49089I$	$7.55238 - 2.16583I$
$u = -0.565766 - 1.046076I$ $a = 0.367327 - 0.299348I$ $b = -0.823952 + 0.390856I$	$0.43832 + 2.94973I$	$-0.155811 + 0.932757I$
$u = -0.565766 + 1.046076I$ $a = 0.367327 + 0.299348I$ $b = -0.823952 - 0.390856I$	$0.43832 - 2.94973I$	$-0.155811 - 0.932757I$
$u = -0.543567 - 1.047648I$ $a = 1.094137 - 0.376840I$ $b = -1.96388 - 0.29327I$	$1.25180 + 5.00759I$	$4.42298 - 8.29581I$
$u = -0.543567 + 1.047648I$ $a = 1.094137 + 0.376840I$ $b = -1.96388 + 0.29327I$	$1.25180 - 5.00759I$	$4.42298 + 8.29581I$
$u = -0.472749 - 0.956015I$ $a = 0.005577 - 0.894910I$ $b = -0.401455 - 1.328768I$	$-2.59160 + 2.64890I$	$7.93440 - 0.25974I$
$u = -0.472749 + 0.956015I$ $a = 0.005577 + 0.894910I$ $b = -0.401455 + 1.328768I$	$-2.59160 - 2.64890I$	$7.93440 + 0.25974I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.463350 - 1.009353I$ $a = -1.65758 + 0.72322I$ $b = 1.80650 + 2.24025I$	$-4.78444 - 1.35131I$	$-4.27766 + 0.75470I$
$u = -0.463350 + 1.009353I$ $a = -1.65758 - 0.72322I$ $b = 1.80650 - 2.24025I$	$-4.78444 + 1.35131I$	$-4.27766 - 0.75470I$
$u = -0.446085 - 0.987433I$ $a = 1.62433 + 1.71267I$ $b = 0.35900 - 1.55836I$	$-4.95602 + 7.28899I$	$-3.44631 - 10.59064I$
$u = -0.446085 + 0.987433I$ $a = 1.62433 - 1.71267I$ $b = 0.35900 + 1.55836I$	$-4.95602 - 7.28899I$	$-3.44631 + 10.59064I$
$u = -0.414857 - 0.874591I$ $a = 0.294459 - 0.130007I$ $b = -3.01727 - 1.36007I$	$-1.97371 + 1.74177I$	$23.4550 - 121.9977I$
$u = -0.414857 + 0.874591I$ $a = 0.294459 + 0.130007I$ $b = -3.01727 + 1.36007I$	$-1.97371 - 1.74177I$	$23.4550 + 121.9977I$
$u = -0.402510 - 0.742669I$ $a = 0.809007 - 0.005257I$ $b = -1.70595 + 0.51223I$	$-1.82096 + 1.07594I$	$4.50674 - 9.78553I$
$u = -0.402510 + 0.742669I$ $a = 0.809007 + 0.005257I$ $b = -1.70595 - 0.51223I$	$-1.82096 - 1.07594I$	$4.50674 + 9.78553I$
$u = -0.310097 - 0.962923I$ $a = -0.203198 - 0.377118I$ $b = 0.589378 + 1.146442I$	$-0.399141 + 1.242874I$	$2.78255 - 0.47703I$
$u = -0.310097 + 0.962923I$ $a = -0.203198 + 0.377118I$ $b = 0.589378 - 1.146442I$	$-0.399141 - 1.242874I$	$2.78255 + 0.47703I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.308021 - 0.765503I$ $a = -2.53061 - 0.93363I$ $b = 0.56577 + 1.31990I$	$-3.96508 - 3.96334I$	$1.62808 + 5.41256I$
$u = -0.308021 + 0.765503I$ $a = -2.53061 + 0.93363I$ $b = 0.56577 - 1.31990I$	$-3.96508 + 3.96334I$	$1.62808 - 5.41256I$
$u = -0.302756 - 0.498441I$ $a = 0.80669 + 1.81429I$ $b = 1.71883 - 0.88436I$	$-3.27231 + 4.97436I$	$-0.70929 - 6.10939I$
$u = -0.302756 + 0.498441I$ $a = 0.80669 - 1.81429I$ $b = 1.71883 + 0.88436I$	$-3.27231 - 4.97436I$	$-0.70929 + 6.10939I$
$u = -0.252798 - 0.419106I$ $a = 0.800172 + 0.152265I$ $b = 0.118406 + 0.473243I$	$0.177915 + 1.269899I$	$1.56526 - 5.04309I$
$u = -0.252798 + 0.419106I$ $a = 0.800172 - 0.152265I$ $b = 0.118406 - 0.473243I$	$0.177915 - 1.269899I$	$1.56526 + 5.04309I$
$u = -0.133175 - 1.309996I$ $a = 0.713576 + 0.645494I$ $b = 0.147379 - 0.551927I$	$-6.74280 - 9.38225I$	$-4.18869 + 6.73293I$
$u = -0.133175 + 1.309996I$ $a = 0.713576 - 0.645494I$ $b = 0.147379 + 0.551927I$	$-6.74280 + 9.38225I$	$-4.18869 - 6.73293I$
$u = -0.07558 - 1.45374I$ $a = -0.404918 - 0.148032I$ $b = -0.254886 + 0.249942I$	$-7.96605 + 0.73193I$	$-7.78538 + 7.49339I$
$u = -0.07558 + 1.45374I$ $a = -0.404918 + 0.148032I$ $b = -0.254886 - 0.249942I$	$-7.96605 - 0.73193I$	$-7.78538 - 7.49339I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.026019 - 1.128802I$ $a = -0.304168 + 0.660277I$ $b = 0.762474 - 0.309723I$	$-2.11387 + 5.01998I$	$-1.70479 - 6.54090I$
$u = -0.026019 + 1.128802I$ $a = -0.304168 - 0.660277I$ $b = 0.762474 + 0.309723I$	$-2.11387 - 5.01998I$	$-1.70479 + 6.54090I$
$u = 0.118039$ $a = -11.5591$ $b = 0.599809$	2.58509	-1.74838
$u = 0.156554 - 0.939549I$ $a = 0.834009 + 0.405130I$ $b = -1.21479 + 0.82322I$	$-3.36242 + 1.21904I$	$-5.20475 - 1.20587I$
$u = 0.156554 + 0.939549I$ $a = 0.834009 - 0.405130I$ $b = -1.21479 - 0.82322I$	$-3.36242 - 1.21904I$	$-5.20475 + 1.20587I$
$u = 0.156902 - 1.376246I$ $a = -0.479174 + 0.373174I$ $b = -0.191229 - 0.058608I$	$-8.19291 + 0.99601I$	$-12.50549 - 5.46822I$
$u = 0.156902 + 1.376246I$ $a = -0.479174 - 0.373174I$ $b = -0.191229 + 0.058608I$	$-8.19291 - 0.99601I$	$-12.50549 + 5.46822I$
$u = 0.159716 - 1.068971I$ $a = 1.199751 - 0.554231I$ $b = -0.407876 + 1.061474I$	$-3.30571 + 2.25191I$	$-1.68071 - 3.36216I$
$u = 0.159716 + 1.068971I$ $a = 1.199751 + 0.554231I$ $b = -0.407876 - 1.061474I$	$-3.30571 - 2.25191I$	$-1.68071 + 3.36216I$
$u = 0.329654 - 1.104694I$ $a = -0.744291 + 0.455673I$ $b = -0.099140 + 0.295640I$	$-6.08185 - 3.72513I$	$-6.16719 + 4.75505I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.329654 + 1.104694I$ $a = -0.744291 - 0.455673I$ $b = -0.099140 - 0.295640I$	$-6.08185 + 3.72513I$	$-6.16719 - 4.75505I$
$u = 0.356062 - 1.034296I$ $a = 1.178538 - 0.759753I$ $b = -0.733515 + 0.323371I$	$-6.47568 + 2.60950I$	$-6.53820 - 0.55886I$
$u = 0.356062 + 1.034296I$ $a = 1.178538 + 0.759753I$ $b = -0.733515 - 0.323371I$	$-6.47568 - 2.60950I$	$-6.53820 + 0.55886I$
$u = 0.424837 - 1.089140I$ $a = -0.140214 + 1.142191I$ $b = -1.168014 + 0.153581I$	$-5.68517 - 3.63758I$	$-6.66279 + 3.62920I$
$u = 0.424837 + 1.089140I$ $a = -0.140214 - 1.142191I$ $b = -1.168014 - 0.153581I$	$-5.68517 + 3.63758I$	$-6.66279 - 3.62920I$
$u = 0.443111 - 0.299368I$ $a = 0.86790 - 1.58226I$ $b = 1.336257 + 0.246304I$	$-3.54835 + 5.18203I$	$-0.91692 - 5.34754I$
$u = 0.443111 + 0.299368I$ $a = 0.86790 + 1.58226I$ $b = 1.336257 - 0.246304I$	$-3.54835 - 5.18203I$	$-0.91692 + 5.34754I$
$u = 0.453521 - 1.073761I$ $a = 0.529945 + 0.821190I$ $b = -1.36116 + 1.01407I$	$-5.48767 - 3.61474I$	$-5.87179 + 4.16226I$
$u = 0.453521 + 1.073761I$ $a = 0.529945 - 0.821190I$ $b = -1.36116 - 1.01407I$	$-5.48767 + 3.61474I$	$-5.87179 - 4.16226I$
$u = 0.498083 - 1.052544I$ $a = -0.939744 - 0.156901I$ $b = 1.40556 - 2.09821I$	$-5.52278 - 9.23097I$	$-4.28452 + 9.47100I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.498083 + 1.052544I$ $a = -0.939744 + 0.156901I$ $b = 1.40556 + 2.09821I$	$-5.52278 + 9.23097I$	$-4.28452 - 9.47100I$
$u = 0.509142 - 1.202888I$ $a = -0.586222 - 1.046174I$ $b = 1.72751 - 0.11942I$	$-0.83504 - 4.53253I$	$0.70969 + 3.63848I$
$u = 0.509142 + 1.202888I$ $a = -0.586222 + 1.046174I$ $b = 1.72751 + 0.11942I$	$-0.83504 + 4.53253I$	$0.70969 - 3.63848I$
$u = 0.520031 - 0.009335I$ $a = 1.274406 + 0.549410I$ $b = -1.287097 - 0.187182I$	$-2.87373 - 0.05987I$	$-2.33537 - 0.50562I$
$u = 0.520031 + 0.009335I$ $a = 1.274406 - 0.549410I$ $b = -1.287097 + 0.187182I$	$-2.87373 + 0.05987I$	$-2.33537 + 0.50562I$
$u = 0.590478 - 1.095828I$ $a = -1.65135 - 0.40006I$ $b = 2.03350 - 1.74729I$	$-0.54688 - 9.42136I$	$3.93170 + 10.37364I$
$u = 0.590478 + 1.095828I$ $a = -1.65135 + 0.40006I$ $b = 2.03350 + 1.74729I$	$-0.54688 + 9.42136I$	$3.93170 - 10.37364I$
$u = 0.593448 - 0.943581I$ $a = -1.221012 - 0.526033I$ $b = 1.82570 - 0.77278I$	$3.17647 - 4.63483I$	$7.88450 + 6.21911I$
$u = 0.593448 + 0.943581I$ $a = -1.221012 + 0.526033I$ $b = 1.82570 + 0.77278I$	$3.17647 + 4.63483I$	$7.88450 - 6.21911I$
$u = 0.619164 - 1.040838I$ $a = -0.955163 + 0.355285I$ $b = 0.694995 - 0.940645I$	$-0.39884 - 7.20242I$	$0.36467 + 7.68652I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.619164 + 1.040838I$ $a = -0.955163 - 0.355285I$ $b = 0.694995 + 0.940645I$	$-0.39884 + 7.20242I$	$0.36467 - 7.68652I$
$u = 0.619610 - 0.688764I$ $a = -0.61816 - 1.45363I$ $b = 1.287221 - 0.162836I$	$3.95086 - 0.15387I$	$11.14106 + 1.02760I$
$u = 0.619610 + 0.688764I$ $a = -0.61816 + 1.45363I$ $b = 1.287221 + 0.162836I$	$3.95086 + 0.15387I$	$11.14106 - 1.02760I$
$u = 0.629457 - 1.164541I$ $a = 0.985074 + 0.435174I$ $b = -1.64513 + 1.23806I$	$-4.78498 - 10.19146I$	$-4.70950 + 8.40125I$
$u = 0.629457 + 1.164541I$ $a = 0.985074 - 0.435174I$ $b = -1.64513 - 1.23806I$	$-4.78498 + 10.19146I$	$-4.70950 - 8.40125I$
$u = 0.634882 - 1.085046I$ $a = 0.955542 + 0.321061I$ $b = -1.94277 + 0.67022I$	$1.88903 - 12.09395I$	$2.07366 + 9.98042I$
$u = 0.634882 + 1.085046I$ $a = 0.955542 - 0.321061I$ $b = -1.94277 - 0.67022I$	$1.88903 + 12.09395I$	$2.07366 - 9.98042I$
$u = 0.672875$ $a = -2.29750$ $b = 1.30076$	2.39150	4.53755
$u = 0.711647 - 0.603130I$ $a = 0.350168 - 0.813699I$ $b = -0.026873 + 0.430913I$	$0.97787 + 2.04675I$	$3.19227 - 3.34627I$
$u = 0.711647 + 0.603130I$ $a = 0.350168 + 0.813699I$ $b = -0.026873 - 0.430913I$	$0.97787 - 2.04675I$	$3.19227 + 3.34627I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.751900 - 0.416167I$ $a = -0.61614 - 1.90849I$ $b = 1.46279 + 0.65211I$	$1.45805 + 4.32698I$	$5.95676 - 6.35990I$
$u = 0.751900 + 0.416167I$ $a = -0.61614 + 1.90849I$ $b = 1.46279 - 0.65211I$	$1.45805 - 4.32698I$	$5.95676 + 6.35990I$
$u = 0.803342 - 0.843458I$ $a = 0.259832 + 0.001428I$ $b = -0.664937 - 0.164755I$	$1.15621 + 2.31115I$	$3.89497 - 3.34806I$
$u = 0.803342 + 0.843458I$ $a = 0.259832 - 0.001428I$ $b = -0.664937 + 0.164755I$	$1.15621 - 2.31115I$	$3.89497 + 3.34806I$
$u = 0.812488 - 0.488151I$ $a = 0.604738 + 1.135376I$ $b = -1.002982 + 0.269592I$	$3.68064 + 6.67564I$	$4.82542 - 5.63610I$
$u = 0.812488 + 0.488151I$ $a = 0.604738 - 1.135376I$ $b = -1.002982 - 0.269592I$	$3.68064 - 6.67564I$	$4.82542 + 5.63610I$
$u = 0.829751$ $a = -0.182489$ $b = -0.666657$	-2.37595	-7.91279
$u = 0.851203 - 0.755593I$ $a = 0.523225 + 0.351783I$ $b = -0.276235 + 0.671677I$	$1.46871 - 8.32039I$	$3.24675 + 8.48549I$
$u = 0.851203 + 0.755593I$ $a = 0.523225 - 0.351783I$ $b = -0.276235 - 0.671677I$	$1.46871 + 8.32039I$	$3.24675 - 8.48549I$
$u = 0.914060 - 0.352085I$ $a = 0.665906 + 0.983085I$ $b = -1.303115 - 0.293994I$	$-2.33944 + 4.55777I$	$-2.47865 - 5.71355I$
Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.914060 + 0.352085I$ $a = 0.665906 - 0.983085I$ $b = -1.303115 + 0.293994I$	$-2.33944 - 4.55777I$	$-2.47865 + 5.71355I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{17} - u^{16} + \dots + 2u + 1)(u^{101} + 24u^{99} + \dots + 10u + 1)$
c_2	$(u^{17} + 11u^{16} + \dots - 2u - 1)(u^{101} + 48u^{100} + \dots + 56u - 1)$
c_3	$(u^{17} + u^{16} + \dots + 3u + 1)(u^{101} + 2u^{100} + \dots + 2225u + 419)$
c_4	$(u^{17} + 2u^{16} + \dots + u + 1)(u^{101} + u^{100} + \dots + 27u + 1)$
c_5	$(u^{17} + u^{16} + \dots + 2u - 1)(u^{101} + 24u^{99} + \dots + 10u + 1)$
c_6	$(u^{17} + 7u^{16} + \dots + 3u + 1)(u^{101} + 2u^{100} + \dots + 509u + 103)$
c_7	$(u^{17} - 2u^{15} + \dots + 2u + 1)(u^{101} + 3u^{100} + \dots + 2286u - 617)$
c_8	$(u^{17} - u^{16} + \dots - 5u - 1)(u^{101} + 2u^{100} + \dots - 3009u - 289)$
c_9	$(u^{17} - u^{16} + \dots + 3u - 1)(u^{101} + 2u^{100} + \dots + 2225u + 419)$
c_{10}	$(u^{17} + 2u^{16} + \dots - 10u + 1)(u^{101} + u^{100} + \dots + 18u + 1)$
c_{11}	$(u^{17} - 2u^{16} + \dots + 6u^2 + 1)(u^{101} + 3u^{100} + \dots - 550u - 25)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y^{17} + 11y^{16} + \dots - 2y - 1)(y^{101} + 48y^{100} + \dots + 56y - 1)$
c_2	$(y^{17} - 5y^{16} + \dots + 18y - 1)(y^{101} + 16y^{100} + \dots + 5112y - 1)$
c_3	$(y^{17} - 7y^{16} + \dots - y - 1)(y^{101} - 66y^{100} + \dots + 4179665y - 175561)$
c_4	$(y^{17} + 8y^{16} + \dots + 3y - 1)(y^{101} - 3y^{100} + \dots + 397y - 1)$
c_6	$(y^{17} + 9y^{16} + \dots + 3y - 1)(y^{101} + 2y^{100} + \dots + 495157y - 10609)$
c_7	$(y^{17} - 4y^{16} + \dots + 6y - 1)$ $(y^{101} - 23y^{100} + \dots + 17244956y - 380689)$
c_8	$(y^{17} + 9y^{16} + \dots + 17y - 1)(y^{101} - 10y^{100} + \dots + 435523y - 83521)$
c_9	$(y^{17} - 7y^{16} + \dots - y - 1)(y^{101} - 66y^{100} + \dots + 4179665y - 175561)$
c_{10}	$(y^{17} + 10y^{16} + \dots + 38y - 1)(y^{101} + 15y^{100} + \dots + 48y - 1)$
c_{11}	$(y^{17} + 6y^{16} + \dots - 12y - 1)(y^{101} - 5y^{100} + \dots + 430150y - 625)$