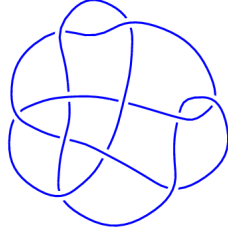
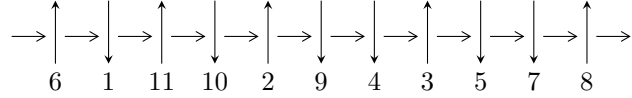


11a₁₃₈ (K11a₁₃₈)

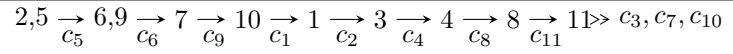


1

Arc Sequences



Solving Sequence



Representation Ideals

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

$$\begin{aligned} I_1^u &= \langle u^{14} - u^{13} + 4u^{12} - 4u^{11} + 9u^{10} - 9u^9 + 14u^8 - 13u^7 + 14u^6 - 11u^5 + 10u^4 - 6u^3 + 4u^2 - 2u + 1, \\ &\quad - 2u^{12} + u^{11} - 6u^{10} + 3u^9 - 10u^8 + 6u^7 - 11u^6 + 6u^5 - 5u^4 + u^3 - 2u^2 + b, \\ &\quad 2u^{13} - u^{12} + 7u^{11} - 4u^{10} + 13u^9 - 9u^8 + 16u^7 - 12u^6 + 10u^5 - 8u^4 + 4u^3 - 2u^2 + a + u - 1 \rangle \\ I_2^u &= \langle u^{94} + 18u^{92} + \dots - 86u + 19, \\ &\quad 2.53312 \times 10^{131}u^{93} + 5.50106 \times 10^{132}u^{92} + \dots + 3.94596 \times 10^{132}b + 5.66772 \times 10^{133}, \\ &\quad 2.57397 \times 10^{133}u^{93} + 8.81637 \times 10^{133}u^{92} + \dots + 7.49732 \times 10^{133}a + 2.04074 \times 10^{135} \rangle \end{aligned}$$

There are 2 irreducible components with 108 representations.

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

$$I_1^u = \langle u^{14} - u^{13} + \dots - 2u + 1, -2u^{12} + u^{11} + \dots - 2u^2 + b, 2u^{13} - u^{12} + \dots + a - 1 \rangle$$

I.

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} -2u^{13} + u^{12} + \dots - u + 1 \\ 2u^{12} - u^{11} + 6u^{10} - 3u^9 + 10u^8 - 6u^7 + 11u^6 - 6u^5 + 5u^4 - u^3 + 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -2u^{13} + u^{12} + \dots - 4u + 3 \\ -u^{13} + u^{12} + \dots - 3u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{13} + u^{12} + \dots - u + 1 \\ 2u^{12} + 6u^{10} + 10u^8 - u^7 + 11u^6 - u^5 + 5u^4 + 3u^2 + 1 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3u^{13} - u^{12} + \dots + 2u^2 - 1 \\ u^{12} - 2u^{11} + \dots + 5u^2 - 3u \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -2u^{13} + u^{12} + \dots + 2u^2 + 1 \\ u^{12} + 2u^{10} + u^9 + 2u^8 + 2u^7 + 4u^5 - 4u^4 + 5u^3 - 2u^2 + 2u - 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{13} + u^{12} - 4u^{11} + 3u^{10} - 8u^9 + 5u^8 - 11u^7 + 5u^6 - 8u^5 - 3u^3 - u^2 \\ -u^{13} - u^{12} + \dots - 3u^2 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{13} + u^{12} - 4u^{11} + 3u^{10} - 8u^9 + 5u^8 - 11u^7 + 5u^6 - 8u^5 - 3u^3 - u^2 \\ -u^{13} - u^{12} + \dots - 3u^2 + u \end{pmatrix}$$

(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
$u = -0.741847 - 1.006643I$		
$a = 0.003263 + 0.366777I$	$-0.27543 + 3.16621I$	$-5.01739 - 7.56548I$
$b = -0.108563 + 0.977487I$		
$u = -0.741847 + 1.006643I$		
$a = 0.003263 - 0.366777I$	$-0.27543 - 3.16621I$	$-5.01739 + 7.56548I$
$b = -0.108563 - 0.977487I$		
$u = -0.473825 - 0.725334I$		
$a = 1.97318 - 0.92036I$	$1.64938 + 1.47694I$	$-29.7777 - 30.0683I$
$b = 1.72162 - 1.13904I$		
$u = -0.473825 + 0.725334I$		
$a = 1.97318 + 0.92036I$	$1.64938 - 1.47694I$	$-29.7777 + 30.0683I$
$b = 1.72162 + 1.13904I$		
$u = -0.218324 - 0.879322I$		
$a = 0.477042 + 0.303428I$	$-3.70335 + 0.96919I$	$-0.59112 - 6.46740I$
$b = 0.01938 + 1.82516I$		
$u = -0.218324 + 0.879322I$		
$a = 0.477042 - 0.303428I$	$-3.70335 - 0.96919I$	$-0.59112 + 6.46740I$
$b = 0.01938 - 1.82516I$		
$u = 0.041315 - 1.259018I$		
$a = 0.907114 + 0.143819I$	$-0.636777 + 1.162526I$	$0.38748 - 2.64720I$
$b = 1.251142 + 0.537115I$		
$u = 0.041315 + 1.259018I$		
$a = 0.907114 - 0.143819I$	$-0.636777 - 1.162526I$	$0.38748 + 2.64720I$
$b = 1.251142 - 0.537115I$		
$u = 0.595922 - 0.607204I$		
$a = -1.28945 + 0.76662I$	$4.21333 + 4.10072I$	$5.58747 - 4.56335I$
$b = 0.401010 - 0.733331I$		
$u = 0.595922 + 0.607204I$		
$a = -1.28945 - 0.76662I$	$4.21333 - 4.10072I$	$5.58747 + 4.56335I$
$b = 0.401010 + 0.733331I$		

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.629454 - 1.045366I$ $a = -0.676415 + 0.741655I$ $b = -1.60069 + 2.02182I$	$2.82526 - 9.05252I$	$3.02000 + 9.52611I$
$u = 0.629454 + 1.045366I$ $a = -0.676415 - 0.741655I$ $b = -1.60069 - 2.02182I$	$2.82526 + 9.05252I$	$3.02000 - 9.52611I$
$u = 0.667304 - 0.401977I$ $a = 0.60527 - 1.48268I$ $b = -0.683901 - 0.483831I$	$4.15226 - 5.01003I$	$2.89129 + 5.27661I$
$u = 0.667304 + 0.401977I$ $a = 0.60527 + 1.48268I$ $b = -0.683901 + 0.483831I$	$4.15226 + 5.01003I$	$2.89129 - 5.27661I$

$$\text{II. } I_2^u = \langle u^{94} + 18u^{92} + \dots - 86u + 19, 2.53 \times 10^{131}u^{93} + 5.50 \times 10^{132}u^{92} + \dots + 3.95 \times 10^{132}b + 5.67 \times 10^{133}, 2.57 \times 10^{133}u^{93} + 8.82 \times 10^{133}u^{92} + \dots + 7.50 \times 10^{133}a + 2.04 \times 10^{135} \rangle$$

(i) Arc colorings

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

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

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

$$a_9 = \begin{pmatrix} -0.343319u^{93} - 1.17594u^{92} + \dots + 47.4340u - 27.2196 \\ -0.0641953u^{93} - 1.39410u^{92} + \dots + 61.0894u - 14.3633 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.05091u^{93} + 1.36980u^{92} + \dots - 265.448u + 70.0756 \\ 2.35688u^{93} + 1.14947u^{92} + \dots + 183.126u - 43.4592 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -0.343319u^{93} - 1.17594u^{92} + \dots + 47.4340u - 27.2196 \\ -1.31423u^{93} - 2.20414u^{92} + \dots - 33.5181u + 7.97945 \end{pmatrix}$$

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

$$a_3 = \begin{pmatrix} u^4 + u^2 + 1 \\ u^4 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2.22029u^{93} + 2.60768u^{92} + \dots + 46.8092u - 1.07893 \\ 2.01186u^{93} + 2.36152u^{92} + \dots - 36.5637u + 19.4508 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.225703u^{93} - 1.08401u^{92} + \dots + 66.3412u - 32.3715 \\ -0.266213u^{93} - 2.07444u^{92} + \dots + 89.5245u - 23.9322 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0928990u^{93} + 1.21606u^{92} + \dots - 162.039u + 48.0660 \\ 1.06053u^{93} - 0.0379060u^{92} + \dots + 130.596u - 38.9836 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0928990u^{93} + 1.21606u^{92} + \dots - 162.039u + 48.0660 \\ 1.06053u^{93} - 0.0379060u^{92} + \dots + 130.596u - 38.9836 \end{pmatrix}$$

(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
$u = -1.154048 - 0.229156I$ $a = -0.018819 + 1.027699I$ $b = 0.001395 + 0.509713I$	$4.11766 + 6.08651I$	$1.89585 - 12.90814I$
$u = -1.154048 + 0.229156I$ $a = -0.018819 - 1.027699I$ $b = 0.001395 - 0.509713I$	$4.11766 - 6.08651I$	$1.89585 + 12.90814I$
$u = -0.958234 - 0.600549I$ $a = -0.978364 - 0.861185I$ $b = 0.095930 - 0.416213I$	$7.78536 - 3.65950I$	$7.19328 + 3.10117I$
$u = -0.958234 + 0.600549I$ $a = -0.978364 + 0.861185I$ $b = 0.095930 + 0.416213I$	$7.78536 + 3.65950I$	$7.19328 - 3.10117I$
$u = -0.890802 - 0.990398I$ $a = 0.597327 + 0.594627I$ $b = 0.03778 + 1.43011I$	$2.07734 + 3.40281I$	$-2.52976 - 3.87991I$
$u = -0.890802 + 0.990398I$ $a = 0.597327 - 0.594627I$ $b = 0.03778 - 1.43011I$	$2.07734 - 3.40281I$	$-2.52976 + 3.87991I$
$u = -0.788570 - 0.519422I$ $a = -1.096853 + 0.333282I$ $b = -0.132574 + 0.469825I$	$0.81606 - 6.58212I$	$0.06641 + 5.80487I$
$u = -0.788570 + 0.519422I$ $a = -1.096853 - 0.333282I$ $b = -0.132574 - 0.469825I$	$0.81606 + 6.58212I$	$0.06641 - 5.80487I$
$u = -0.772806 - 0.634311I$ $a = 0.965714 + 0.666676I$ $b = -0.729722 - 0.142198I$	$2.72382 - 3.59329I$	$-1.36149 + 3.84627I$
$u = -0.772806 + 0.634311I$ $a = 0.965714 - 0.666676I$ $b = -0.729722 + 0.142198I$	$2.72382 + 3.59329I$	$-1.36149 - 3.84627I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.745984 - 0.804640I$ $a = -0.935224 - 0.845126I$ $b = 0.056334 - 0.827532I$	$6.26917 + 2.63292I$	$5.69618 - 3.39145I$
$u = -0.745984 + 0.804640I$ $a = -0.935224 + 0.845126I$ $b = 0.056334 + 0.827532I$	$6.26917 - 2.63292I$	$5.69618 + 3.39145I$
$u = -0.737805 - 1.096794I$ $a = -0.703640 - 0.952177I$ $b = -0.91653 - 2.05044I$	$6.23852 + 9.84950I$	$4.39001 - 7.64089I$
$u = -0.737805 + 1.096794I$ $a = -0.703640 + 0.952177I$ $b = -0.91653 + 2.05044I$	$6.23852 - 9.84950I$	$4.39001 + 7.64089I$
$u = -0.732135 - 0.860734I$ $a = -0.905163 - 0.802490I$ $b = 0.11865 - 1.59187I$	$6.12499 + 2.78185I$	$6.38795 - 2.74253I$
$u = -0.732135 + 0.860734I$ $a = -0.905163 + 0.802490I$ $b = 0.11865 + 1.59187I$	$6.12499 - 2.78185I$	$6.38795 + 2.74253I$
$u = -0.712836 - 0.893503I$ $a = -0.842198 - 0.774077I$ $b = -0.57020 - 1.78608I$	$6.00363 + 2.90156I$	$5.29122 - 2.98759I$
$u = -0.712836 + 0.893503I$ $a = -0.842198 + 0.774077I$ $b = -0.57020 + 1.78608I$	$6.00363 - 2.90156I$	$5.29122 + 2.98759I$
$u = -0.695476 - 0.779469I$ $a = 1.37745 + 0.59069I$ $b = 0.0257528 + 0.0934147I$	$6.51815 - 3.45234I$	$5.48898 + 1.92372I$
$u = -0.695476 + 0.779469I$ $a = 1.37745 - 0.59069I$ $b = 0.0257528 - 0.0934147I$	$6.51815 + 3.45234I$	$5.48898 - 1.92372I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.685534 - 1.022396I$ $a = 0.570647 + 0.767577I$ $b = 1.20915 + 2.40312I$	$1.56372 + 9.12407I$	$-4.29429 - 9.46951I$
$u = -0.685534 + 1.022396I$ $a = 0.570647 - 0.767577I$ $b = 1.20915 - 2.40312I$	$1.56372 - 9.12407I$	$-4.29429 + 9.46951I$
$u = -0.675420 - 0.918989I$ $a = 0.698394 + 1.177555I$ $b = 1.12883 + 2.25849I$	$6.09111 + 8.73034I$	$4.17794 - 8.47803I$
$u = -0.675420 + 0.918989I$ $a = 0.698394 - 1.177555I$ $b = 1.12883 - 2.25849I$	$6.09111 - 8.73034I$	$4.17794 + 8.47803I$
$u = -0.671783 - 0.586083I$ $a = 0.242407 + 0.178172I$ $b = -0.256270 - 0.946203I$	$2.58045 - 2.08956I$	$3.02938 + 2.37261I$
$u = -0.671783 + 0.586083I$ $a = 0.242407 - 0.178172I$ $b = -0.256270 + 0.946203I$	$2.58045 + 2.08956I$	$3.02938 - 2.37261I$
$u = -0.655731 - 1.063816I$ $a = 0.322649 - 0.952140I$ $b = 0.08535 - 1.84948I$	$-0.78035 + 12.02031I$	$-2.29206 - 10.05499I$
$u = -0.655731 + 1.063816I$ $a = 0.322649 + 0.952140I$ $b = 0.08535 + 1.84948I$	$-0.78035 - 12.02031I$	$-2.29206 + 10.05499I$
$u = -0.626927 - 1.026074I$ $a = -0.072642 + 0.169203I$ $b = 0.855407 + 0.727862I$	$1.27843 + 7.16623I$	$-0.13912 - 7.53857I$
$u = -0.626927 + 1.026074I$ $a = -0.072642 - 0.169203I$ $b = 0.855407 - 0.727862I$	$1.27843 - 7.16623I$	$-0.13912 + 7.53857I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.526379 - 0.975572I$ $a = -0.285436 + 0.628695I$ $b = 0.02471 + 1.80111I$	$-2.74009 + 4.79051I$	$-7.62795 - 7.28564I$
$u = -0.526379 + 0.975572I$ $a = -0.285436 - 0.628695I$ $b = 0.02471 - 1.80111I$	$-2.74009 - 4.79051I$	$-7.62795 + 7.28564I$
$u = -0.372193 - 0.319512I$ $a = 1.119171 - 0.597617I$ $b = -0.351039 - 0.342846I$	$-1.35478 - 0.87382I$	$-4.52639 + 1.86312I$
$u = -0.372193 + 0.319512I$ $a = 1.119171 + 0.597617I$ $b = -0.351039 + 0.342846I$	$-1.35478 + 0.87382I$	$-4.52639 - 1.86312I$
$u = -0.274173 - 0.962209I$ $a = 0.071947 + 0.432940I$ $b = -0.52961 + 1.71858I$	$-4.34588 + 0.86890I$	$-13.9925 - 2.3122I$
$u = -0.274173 + 0.962209I$ $a = 0.071947 - 0.432940I$ $b = -0.52961 - 1.71858I$	$-4.34588 - 0.86890I$	$-13.9925 + 2.3122I$
$u = -0.236372 - 0.894495I$ $a = 0.397500 - 0.466475I$ $b = -0.377840 - 0.459884I$	$-1.55461 - 1.18795I$	$-5.25040 + 3.52680I$
$u = -0.236372 + 0.894495I$ $a = 0.397500 + 0.466475I$ $b = -0.377840 + 0.459884I$	$-1.55461 + 1.18795I$	$-5.25040 - 3.52680I$
$u = -0.191973 - 1.387138I$ $a = 0.723180 + 0.023604I$ $b = 0.910688 + 0.247145I$	$-0.794911 - 0.333244I$	$-4.07684 - 2.62495I$
$u = -0.191973 + 1.387138I$ $a = 0.723180 - 0.023604I$ $b = 0.910688 - 0.247145I$	$-0.794911 + 0.333244I$	$-4.07684 + 2.62495I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.182172 - 1.261938I$ $a = -0.909401 - 0.518285I$ $b = -1.25783 - 1.26326I$	$-1.47238 + 10.24953I$	$-3.11527 - 8.40903I$
$u = -0.182172 + 1.261938I$ $a = -0.909401 + 0.518285I$ $b = -1.25783 + 1.26326I$	$-1.47238 - 10.24953I$	$-3.11527 + 8.40903I$
$u = 0.000285 - 1.159922I$ $a = -0.094852 - 0.884856I$ $b = 0.21406 - 1.79560I$	$-5.00871 - 4.94387I$	$-6.82451 + 5.88311I$
$u = 0.000285 + 1.159922I$ $a = -0.094852 + 0.884856I$ $b = 0.21406 + 1.79560I$	$-5.00871 + 4.94387I$	$-6.82451 - 5.88311I$
$u = 0.047677 - 0.756229I$ $a = -1.33053 + 0.60668I$ $b = -2.36212 + 0.17230I$	$2.25517 - 5.11870I$	$-2.20140 + 6.13323I$
$u = 0.047677 + 0.756229I$ $a = -1.33053 - 0.60668I$ $b = -2.36212 - 0.17230I$	$2.25517 + 5.11870I$	$-2.20140 - 6.13323I$
$u = 0.055511 - 1.062534I$ $a = -0.835539 + 0.334959I$ $b = -1.43176 + 1.34547I$	$-3.10746 - 3.06338I$	$-6.90352 + 6.63954I$
$u = 0.055511 + 1.062534I$ $a = -0.835539 - 0.334959I$ $b = -1.43176 - 1.34547I$	$-3.10746 + 3.06338I$	$-6.90352 - 6.63954I$
$u = 0.074483 - 0.887023I$ $a = -0.652703 + 0.497524I$ $b = -0.16006 + 2.09086I$	$-4.11297 - 0.07058I$	$-8.74341 - 0.53456I$
$u = 0.074483 + 0.887023I$ $a = -0.652703 - 0.497524I$ $b = -0.16006 - 2.09086I$	$-4.11297 + 0.07058I$	$-8.74341 + 0.53456I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.187919 - 1.179453I$ $a = 1.019440 + 0.000848I$ $b = 1.71614 + 0.56134I$	$-1.19365 + 1.54765I$	$-8.46781 - 7.31335I$
$u = 0.187919 + 1.179453I$ $a = 1.019440 - 0.000848I$ $b = 1.71614 - 0.56134I$	$-1.19365 - 1.54765I$	$-8.46781 + 7.31335I$
$u = 0.326338 - 0.736385I$ $a = 1.80513 - 0.54254I$ $b = 1.161276 - 0.172700I$	$1.27718 - 1.12906I$	$-1.89401 + 8.56512I$
$u = 0.326338 + 0.736385I$ $a = 1.80513 + 0.54254I$ $b = 1.161276 + 0.172700I$	$1.27718 + 1.12906I$	$-1.89401 - 8.56512I$
$u = 0.331512 - 0.359265I$ $a = 2.06138 - 0.17441I$ $b = 1.083545 - 0.188636I$	$1.80205 - 1.10971I$	$0.93812 - 3.27932I$
$u = 0.331512 + 0.359265I$ $a = 2.06138 + 0.17441I$ $b = 1.083545 + 0.188636I$	$1.80205 + 1.10971I$	$0.93812 + 3.27932I$
$u = 0.345824 - 1.101662I$ $a = 0.561890 - 0.724085I$ $b = 0.599705 - 1.193738I$	$-0.62322 - 2.44856I$	$-2.57464 + 7.28809I$
$u = 0.345824 + 1.101662I$ $a = 0.561890 + 0.724085I$ $b = 0.599705 + 1.193738I$	$-0.62322 + 2.44856I$	$-2.57464 - 7.28809I$
$u = 0.348886 - 0.562301I$ $a = -1.91763 + 0.75028I$ $b = 0.718764 - 0.485022I$	$3.26202 + 4.12377I$	$-3.82614 - 3.00808I$
$u = 0.348886 + 0.562301I$ $a = -1.91763 - 0.75028I$ $b = 0.718764 + 0.485022I$	$3.26202 - 4.12377I$	$-3.82614 + 3.00808I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.525700 - 0.752927I$		
$a = 1.54462 + 1.55397I$	$1.74995 - 1.48935I$	$34.1539 + 39.5645I$
$b = 1.27059 + 1.88705I$		
$u = 0.525700 + 0.752927I$		
$a = 1.54462 - 1.55397I$	$1.74995 + 1.48935I$	$34.1539 - 39.5645I$
$b = 1.27059 - 1.88705I$		
$u = 0.558579 - 0.339705I$		
$a = -1.39393 + 1.53590I$	$3.25748 + 4.05422I$	$-1.13185 - 3.03795I$
$b = 0.510988 - 0.126573I$		
$u = 0.558579 + 0.339705I$		
$a = -1.39393 - 1.53590I$	$3.25748 - 4.05422I$	$-1.13185 + 3.03795I$
$b = 0.510988 + 0.126573I$		
$u = 0.566930 - 0.359574I$		
$a = 0.86644 - 1.30126I$	$1.32685 - 1.54158I$	$1.03113 + 4.33342I$
$b = 0.381966 - 0.343860I$		
$u = 0.566930 + 0.359574I$		
$a = 0.86644 + 1.30126I$	$1.32685 + 1.54158I$	$1.03113 - 4.33342I$
$b = 0.381966 + 0.343860I$		
$u = 0.580548 - 0.957210I$		
$a = -0.864386 - 1.095100I$	$1.01885 - 3.00871I$	$7.67842 - 5.76703I$
$b = -0.45989 - 1.49085I$		
$u = 0.580548 + 0.957210I$		
$a = -0.864386 + 1.095100I$	$1.01885 + 3.00871I$	$7.67842 + 5.76703I$
$b = -0.45989 + 1.49085I$		
$u = 0.592379 - 0.857518I$		
$a = -1.48158 + 1.10986I$	$2.76989 - 2.34388I$	$-8.73657 + 1.69893I$
$b = -0.77672 + 1.77752I$		
$u = 0.592379 + 0.857518I$		
$a = -1.48158 - 1.10986I$	$2.76989 + 2.34388I$	$-8.73657 - 1.69893I$
$b = -0.77672 - 1.77752I$		

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.596735 - 1.047627I$ $a = -0.809716 + 0.781497I$ $b = -1.51544 + 2.39054I$	$1.55735 - 8.77630I$	$-4.68174 + 8.29059I$
$u = 0.596735 + 1.047627I$ $a = -0.809716 - 0.781497I$ $b = -1.51544 - 2.39054I$	$1.55735 + 8.77630I$	$-4.68174 - 8.29059I$
$u = 0.603887 - 1.145813I$ $a = 0.314663 - 0.682171I$ $b = 0.297242 - 1.239135I$	$-0.76570 - 2.63619I$	$-8.70822 + 0.52578I$
$u = 0.603887 + 1.145813I$ $a = 0.314663 + 0.682171I$ $b = 0.297242 + 1.239135I$	$-0.76570 + 2.63619I$	$-8.70822 - 0.52578I$
$u = 0.634876 - 0.844268I$ $a = 0.951142 - 0.740289I$ $b = -1.43828 - 0.46615I$	$5.15766 - 6.81146I$	$3.76128 + 9.14677I$
$u = 0.634876 + 0.844268I$ $a = 0.951142 + 0.740289I$ $b = -1.43828 + 0.46615I$	$5.15766 + 6.81146I$	$3.76128 - 9.14677I$
$u = 0.641346 - 0.865360I$ $a = 0.861053 - 0.657168I$ $b = 1.26818 - 2.74958I$	$5.09034 + 1.82821I$	$4.00840 - 1.79500I$
$u = 0.641346 + 0.865360I$ $a = 0.861053 + 0.657168I$ $b = 1.26818 + 2.74958I$	$5.09034 - 1.82821I$	$4.00840 + 1.79500I$
$u = 0.655266 - 0.957538I$ $a = 0.695496 + 0.346942I$ $b = 0.382605 + 1.343720I$	$-0.56730 - 4.67706I$	$-4.98504 + 7.99066I$
$u = 0.655266 + 0.957538I$ $a = 0.695496 - 0.346942I$ $b = 0.382605 - 1.343720I$	$-0.56730 + 4.67706I$	$-4.98504 - 7.99066I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.666004 - 0.953204I$		
$a = 0.388918 - 0.151109I$	$0.27532 - 2.65301I$	$1.48368 - 0.43332I$
$b = 0.291873 + 0.079820I$		
$u = 0.666004 + 0.953204I$		
$a = 0.388918 + 0.151109I$	$0.27532 + 2.65301I$	$1.48368 + 0.43332I$
$b = 0.291873 - 0.079820I$		
$u = 0.668968 - 0.720659I$		
$a = -0.307459 - 0.791136I$	$0.151749 - 0.477282I$	$-3.82978 - 1.44096I$
$b = 0.493035 - 0.906763I$		
$u = 0.668968 + 0.720659I$		
$a = -0.307459 + 0.791136I$	$0.151749 + 0.477282I$	$-3.82978 + 1.44096I$
$b = 0.493035 + 0.906763I$		
$u = 0.734623 - 1.141254I$		
$a = -0.722524 + 0.594953I$	$5.26894 - 8.76068I$	$4.41884 + 7.51477I$
$b = -1.14467 + 1.59039I$		
$u = 0.734623 + 1.141254I$		
$a = -0.722524 - 0.594953I$	$5.26894 + 8.76068I$	$4.41884 - 7.51477I$
$b = -1.14467 - 1.59039I$		
$u = 0.735857 - 1.101584I$		
$a = 0.714256 - 0.936075I$	$4.6871 - 18.0471I$	$0.90658 + 9.95509I$
$b = 1.03733 - 2.31889I$		
$u = 0.735857 + 1.101584I$		
$a = 0.714256 + 0.936075I$	$4.6871 + 18.0471I$	$0.90658 - 9.95509I$
$b = 1.03733 + 2.31889I$		
$u = 0.850683 - 0.581825I$		
$a = 0.426900 + 0.073951I$	$1.11160 - 3.31196I$	$0.24905 + 8.80050I$
$b = -0.005625 - 0.457661I$		
$u = 0.850683 + 0.581825I$		
$a = 0.426900 - 0.073951I$	$1.11160 + 3.31196I$	$0.24905 - 8.80050I$
$b = -0.005625 + 0.457661I$		

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.951027 - 0.599721I$ $a = 1.021364 - 0.873477I$ $b = -0.369019 - 0.349339I$	$6.25206 + 11.87072I$	$2.93072 - 6.04856I$
$u = 0.951027 + 0.599721I$ $a = 1.021364 + 0.873477I$ $b = -0.369019 + 0.349339I$	$6.25206 - 11.87072I$	$2.93072 + 6.04856I$
$u = 1.005510 - 0.537423I$ $a = -0.555244 + 0.968467I$ $b = 0.307934 + 0.279965I$	$7.14357 + 2.45971I$	$7.03746 - 2.89681I$
$u = 1.005510 + 0.537423I$ $a = -0.555244 - 0.968467I$ $b = 0.307934 - 0.279965I$	$7.14357 - 2.45971I$	$7.03746 + 2.89681I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{14} - u^{13} + \dots - 2u + 1)(u^{94} + 18u^{92} + \dots - 86u + 19)$
c_2	$(u^{14} + 7u^{13} + \dots + 4u + 1)(u^{94} + 36u^{93} + \dots + 8108u + 361)$
c_3	$(u^{14} - 2u^{13} + \dots + 2u + 1)(u^{94} + 5u^{93} + \dots + 88u + 11)$
c_4	$(u^{14} - 2u^{13} + \dots + 4u + 1)(u^{94} + u^{93} + \dots + 724u + 59)$
c_5	$(u^{14} + u^{13} + \dots + 2u + 1)(u^{94} + 18u^{92} + \dots - 86u + 19)$
c_6	$(u^{14} - 6u^{13} + \dots - 5u + 1)(u^{94} + u^{93} + \dots + 33u + 781)$
c_7	$(u^{14} + u^{12} + \dots + 4u + 1)(u^{94} + 3u^{93} + \dots - 872u + 184)$
c_8	$(u^{14} + 2u^{13} + \dots - 4u + 1)(u^{94} + u^{93} + \dots - 6u + 1)$
c_9	$(u^{14} + 2u^{13} + \dots - 4u + 1)(u^{94} + u^{93} + \dots + 724u + 59)$
c_{10}	$(u^{14} - u^{13} + \dots + 6u + 1)(u^{94} + 2u^{93} + \dots + 22u + 1)$
c_{11}	$(u^{14} + 2u^{13} + \dots - 3u + 1)(u^{94} + 3u^{93} + \dots - 519u + 19)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y^{14} + 7y^{13} + \dots + 4y + 1)(y^{94} + 36y^{93} + \dots + 8108y + 361)$
c_2	$(y^{14} + 3y^{13} + \dots + 8y + 1)(y^{94} + 48y^{93} + \dots + 1.32356 \times 10^7 y + 130321)$
c_3	$(y^{14} + 14y^{12} + \dots + 4y + 1)(y^{94} + 9y^{93} + \dots + 7084y + 121)$
c_4	$(y^{14} + 8y^{13} + \dots + 8y + 1)(y^{94} + 69y^{93} + \dots - 23148y + 3481)$
c_6	$(y^{14} + 10y^{13} + \dots + 21y + 1)$ $(y^{94} + 27y^{93} + \dots + 20468921y + 609961)$
c_7	$(y^{14} + 2y^{13} + \dots + 8y + 1)(y^{94} + 23y^{93} + \dots + 1507232y + 33856)$
c_8	$(y^{14} - 6y^{13} + \dots - 2y + 1)(y^{94} - 5y^{93} + \dots - 10y + 1)$
c_9	$(y^{14} + 8y^{13} + \dots + 8y + 1)(y^{94} + 69y^{93} + \dots - 23148y + 3481)$
c_{10}	$(y^{14} + 3y^{13} + \dots + 6y + 1)(y^{94} + 8y^{93} + \dots - 18y + 1)$
c_{11}	$(y^{14} + 4y^{13} + \dots - 9y + 1)(y^{94} - 15y^{93} + \dots - 72597y + 361)$