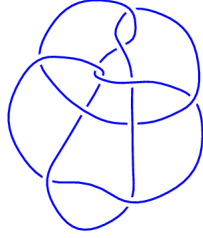
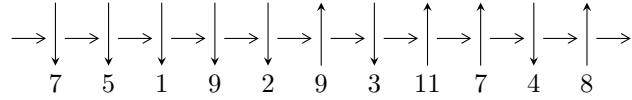


11n₁₆₈ (K11n₁₆₈)

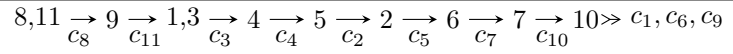


1

Arc Sequences



Solving Sequence



Representation Ideals

$$I = \bigcap_{i=1}^3 I_i^u$$

$$\begin{aligned} I_1^u &= \langle u^{12} + u^{10} - 2u^9 + 4u^8 - 3u^7 + 5u^6 - 5u^5 + 6u^4 - 3u^3 + 3u^2 - 3u + 1, \\ &\quad - 4u^{11} - 13u^{10} - 15u^9 + 3u^8 - 13u^6 - 31u^5 + 13u^4 - 13u^3 + u^2 + 25b - 15u + 7, \\ &\quad 19u^{11} - 7u^{10} + 15u^9 - 58u^8 + 75u^7 - 82u^6 + 116u^5 - 143u^4 + 118u^3 - 86u^2 + 25a + 65u - 77 \rangle \\ I_2^u &= \langle u^{24} - u^{23} + \dots - 4u + 1, 7.13253 \times 10^{25}u^{23} - 2.22737 \times 10^{25}u^{22} + \dots + 2.25715 \times 10^{25}b - 1.14477 \times 10^{26}, \\ &\quad 1.78850 \times 10^{27}u^{23} - 9.59380 \times 10^{26}u^{22} + \dots + 5.64286 \times 10^{26}a - 4.28995 \times 10^{27} \rangle \\ I_3^u &= \langle u^{25} - 7u^{23} + \dots - 8u + 1, \\ &\quad - 20025629876734u^{24} + 32815384984813u^{23} + \dots + 605049147419665b + 74356614651533, \\ &\quad 239751606214929u^{24} - 74356614651533u^{23} + \dots + 605049147419665a - 4360379155201633 \rangle \end{aligned}$$

There are 3 irreducible components with 61 representations.

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

$$\mathbf{I. } I_1^u = \langle u^{12} + u^{10} + \dots - 3u + 1, -4u^{11} - 13u^{10} + \dots + 25b + 7, 19u^{11} - 7u^{10} + \dots + 25a - 77 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.760000u^{11} + 0.280000u^{10} + \dots - 2.60000u + 3.08000 \\ \frac{4}{25}u^{11} + \frac{13}{25}u^{10} + \dots + \frac{3}{5}u - \frac{7}{25} \end{pmatrix} \\ a_9 &= \begin{pmatrix} -\frac{2}{5}u^{11} + \frac{1}{5}u^{10} + \dots + \frac{13}{5}u^2 + \frac{11}{5} \\ \frac{6}{25}u^{11} + \frac{7}{25}u^{10} + \dots + \frac{2}{5}u + \frac{2}{25} \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.760000u^{11} + 0.280000u^{10} + \dots - 2.60000u + 3.08000 \\ -u \end{pmatrix} \\ a_3 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_4 &= \begin{pmatrix} -\frac{7}{25}u^{11} - \frac{4}{25}u^{10} + \dots - \frac{4}{5}u + \frac{6}{25} \\ u^2 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -2.68000u^{11} - 1.96000u^{10} + \dots - 6.80000u + 3.44000 \\ -0.160000u^{11} - 0.520000u^{10} + \dots - 1.60000u + 1.28000 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -\frac{3}{5}u^{11} + \frac{4}{5}u^{10} + \dots - u + \frac{14}{5} \\ \frac{4}{25}u^{11} + \frac{13}{25}u^{10} + \dots + \frac{3}{5}u - \frac{7}{25} \end{pmatrix} \\ a_6 &= \begin{pmatrix} -\frac{6}{5}u^{11} - \frac{7}{5}u^{10} + \dots - 2u - \frac{2}{5} \\ -0.680000u^{11} - 0.960000u^{10} + \dots + 0.200000u + 0.440000 \end{pmatrix} \\ a_7 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -0.640000u^{11} - 0.0800000u^{10} + \dots - 0.400000u + 2.12000 \\ 0 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} -0.640000u^{11} - 0.0800000u^{10} + \dots - 0.400000u + 2.12000 \\ 0 \end{pmatrix} \end{aligned}$$

(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
$u = -1.02625 - 1.07318I$ $a = 0.379524 + 0.699564I$ $b = -0.55207 + 1.84022I$	$1.85485 - 5.48541I$	$0.93921 + 8.00832I$
$u = -1.02625 + 1.07318I$ $a = 0.379524 - 0.699564I$ $b = -0.55207 - 1.84022I$	$1.85485 + 5.48541I$	$0.93921 - 8.00832I$
$u = -0.603205 - 0.775464I$ $a = -0.818055 + 0.258374I$ $b = 0.555767 - 0.051210I$	$4.01613 - 1.54035I$	$3.24789 - 1.08803I$
$u = -0.603205 + 0.775464I$ $a = -0.818055 - 0.258374I$ $b = 0.555767 + 0.051210I$	$4.01613 + 1.54035I$	$3.24789 + 1.08803I$
$u = -0.351412 - 0.975594I$ $a = 0.973934 + 0.121616I$ $b = -0.53868 + 1.54266I$	$-5.37548 + 4.45869I$	$-5.23379 - 2.73299I$
$u = -0.351412 + 0.975594I$ $a = 0.973934 - 0.121616I$ $b = -0.53868 - 1.54266I$	$-5.37548 - 4.45869I$	$-5.23379 + 2.73299I$
$u = 0.504389 - 0.932104I$ $a = -1.035620 + 0.479382I$ $b = 0.58266 + 1.61135I$	$-6.48342 + 2.87353I$	$-6.21901 - 3.05514I$
$u = 0.504389 + 0.932104I$ $a = -1.035620 - 0.479382I$ $b = 0.58266 - 1.61135I$	$-6.48342 - 2.87353I$	$-6.21901 + 3.05514I$
$u = 0.522926 - 0.172175I$ $a = 2.24735 + 0.14288I$ $b = 0.050723 - 0.197669I$	$1.62052 - 0.67051I$	$-10.59498 - 6.84644I$
$u = 0.522926 + 0.172175I$ $a = 2.24735 - 0.14288I$ $b = 0.050723 + 0.197669I$	$1.62052 + 0.67051I$	$-10.59498 + 6.84644I$

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.953548 - 0.611838I$	$-2.21233 + 5.51031I$	$-2.13932 - 5.32316I$
$a = -0.247131 + 1.274676I$		
$b = 0.40159 + 1.58203I$		
$u = 0.953548 + 0.611838I$	$-2.21233 - 5.51031I$	$-2.13932 + 5.32316I$
$a = -0.247131 - 1.274676I$		
$b = 0.40159 - 1.58203I$		

II.

$$I_2^u = \langle u^{24} - u^{23} + \dots - 4u + 1, 7.13 \times 10^{25} u^{23} - 2.23 \times 10^{25} u^{22} + \dots + 2.26 \times 10^{25} b - 1.14 \times 10^{26}, 1.79 \times 10^{27} u^{23} - 9.59 \times 10^{26} u^{22} + \dots + 5.64 \times 10^{26} a - 4.29 \times 10^{27} \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -3.16949u^{23} + 1.70016u^{22} + \dots - 12.4493u + 7.60243 \\ -3.15998u^{23} + 0.986808u^{22} + \dots - 11.1571u + 5.07176 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.861960u^{23} + 0.299637u^{22} + \dots + 1.65849u + 2.10829 \\ 4.80135u^{23} - 1.75071u^{22} + \dots + 18.8922u - 6.65574 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -3.16949u^{23} + 1.70016u^{22} + \dots - 12.4493u + 7.60243 \\ -2.16949u^{23} + 0.700165u^{22} + \dots - 8.44930u + 3.60243 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 5.49414u^{23} - 1.46269u^{22} + \dots + 20.0162u - 6.86876 \\ 9.09657u^{23} - 2.89563u^{22} + \dots + 34.9044u - 13.8292 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -3.63374u^{23} + 2.73697u^{22} + \dots - 21.4409u + 11.6546 \\ -0.641384u^{23} + 0.526275u^{22} + \dots - 2.70213u + 1.98666 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -3.16949u^{23} + 1.70016u^{22} + \dots - 11.4493u + 7.60243 \\ -2.16949u^{23} + 0.700165u^{22} + \dots - 7.44930u + 3.60243 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 2.86671u^{23} - 0.0380303u^{22} + \dots + 5.51479u - 0.352725 \\ 3.87240u^{23} - 0.903452u^{22} + \dots + 14.5861u - 4.77613 \end{pmatrix} \\ a_7 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 2.07983u^{23} - 0.101523u^{22} + \dots + 5.27527u + 0.219252 \\ 6.01922u^{23} - 2.15187u^{22} + \dots + 22.5090u - 8.54478 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 2.07983u^{23} - 0.101523u^{22} + \dots + 5.27527u + 0.219252 \\ 6.01922u^{23} - 2.15187u^{22} + \dots + 22.5090u - 8.54478 \end{pmatrix} \end{aligned}$$

(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
$u = -1.63727 - 1.77021I$ $a = 0.377830 + 0.348770I$ $b = -1.53343 + 2.07647I$	$-7.81112 - 2.53747I$	$-14.4387 + 1.7127I$
$u = -1.63727 + 1.77021I$ $a = 0.377830 - 0.348770I$ $b = -1.53343 - 2.07647I$	$-7.81112 + 2.53747I$	$-14.4387 - 1.7127I$
$u = -1.007826 - 0.931272I$ $a = 0.433427 + 0.982322I$ $b = -0.81094 + 1.44716I$	$-2.89796 - 6.22910I$	$-8.04009 + 11.28166I$
$u = -1.007826 + 0.931272I$ $a = 0.433427 - 0.982322I$ $b = -0.81094 - 1.44716I$	$-2.89796 + 6.22910I$	$-8.04009 - 11.28166I$
$u = -0.708011 - 0.906125I$ $a = 0.293372 - 0.135901I$ $b = 0.909352 - 0.401261I$	$-3.58234 - 3.33657I$	$-2.17703 + 1.92424I$
$u = -0.708011 + 0.906125I$ $a = 0.293372 + 0.135901I$ $b = 0.909352 + 0.401261I$	$-3.58234 + 3.33657I$	$-2.17703 - 1.92424I$
$u = -0.625850 - 0.653229I$ $a = 0.516479 + 1.293486I$ $b = 0.205505 + 0.872305I$	$-1.08693 - 4.46082I$	$-0.35199 + 4.72827I$
$u = -0.625850 + 0.653229I$ $a = 0.516479 - 1.293486I$ $b = 0.205505 - 0.872305I$	$-1.08693 + 4.46082I$	$-0.35199 - 4.72827I$
$u = -0.624755 - 0.225337I$ $a = -0.34040 - 1.70022I$ $b = 1.43910 - 2.88422I$	$-6.29691 - 5.40399I$	$-10.52298 + 8.56336I$
$u = -0.624755 + 0.225337I$ $a = -0.34040 + 1.70022I$ $b = 1.43910 + 2.88422I$	$-6.29691 + 5.40399I$	$-10.52298 - 8.56336I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.097566 - 0.372381I$ $a = -0.27117 + 2.62197I$ $b = 0.231733 - 0.249277I$	$1.93604 - 0.91968I$	$3.53074 + 7.18196I$
$u = -0.097566 + 0.372381I$ $a = -0.27117 - 2.62197I$ $b = 0.231733 + 0.249277I$	$1.93604 + 0.91968I$	$3.53074 - 7.18196I$
$u = 0.387233 - 0.109050I$ $a = 2.29511 + 1.04619I$ $b = 0.307647 + 0.322980I$	$1.93604 + 0.91968I$	$3.53074 - 7.18196I$
$u = 0.387233 + 0.109050I$ $a = 2.29511 - 1.04619I$ $b = 0.307647 - 0.322980I$	$1.93604 - 0.91968I$	$3.53074 + 7.18196I$
$u = 0.659423 - 0.044313I$ $a = -0.12761 + 1.87166I$ $b = -1.58313 + 2.58787I$	$-7.81112 + 2.53747I$	$-14.4387 - 1.7127I$
$u = 0.659423 + 0.044313I$ $a = -0.12761 - 1.87166I$ $b = -1.58313 - 2.58787I$	$-7.81112 - 2.53747I$	$-14.4387 + 1.7127I$
$u = 0.828793 - 0.821143I$ $a = -0.099131 - 0.302865I$ $b = -1.121497 - 0.775020I$	$-3.58234 - 3.33657I$	$-2.17703 + 1.92424I$
$u = 0.828793 + 0.821143I$ $a = -0.099131 + 0.302865I$ $b = -1.121497 + 0.775020I$	$-3.58234 + 3.33657I$	$-2.17703 - 1.92424I$
$u = 0.968657 - 0.487749I$ $a = -0.184274 + 1.345956I$ $b = 0.13493 + 2.04810I$	$-2.89796 + 6.22910I$	$-8.04009 - 11.28166I$
$u = 0.968657 + 0.487749I$ $a = -0.184274 - 1.345956I$ $b = 0.13493 - 2.04810I$	$-2.89796 - 6.22910I$	$-8.04009 + 11.28166I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.07597 - 2.21108I$ $a = -0.446808 + 0.140338I$ $b = 1.71010 + 1.37700I$	$-6.29691 - 5.40399I$	$-10.52298 + 8.56336I$
$u = 1.07597 + 2.21108I$ $a = -0.446808 - 0.140338I$ $b = 1.71010 - 1.37700I$	$-6.29691 + 5.40399I$	$-10.52298 - 8.56336I$
$u = 1.281207 - 0.495305I$ $a = 0.053181 + 0.915737I$ $b = 0.61063 + 1.86425I$	$-1.08693 + 4.46082I$	$-0.35199 - 4.72827I$
$u = 1.281207 + 0.495305I$ $a = 0.053181 - 0.915737I$ $b = 0.61063 - 1.86425I$	$-1.08693 - 4.46082I$	$-0.35199 + 4.72827I$

$$\text{III. } I_3^u = \langle u^{25} - 7u^{23} + \dots - 8u + 1, -2.00 \times 10^{13}u^{24} + 3.28 \times 10^{13}u^{23} + \dots + 6.05 \times 10^{14}b + 7.44 \times 10^{13}, 2.40 \times 10^{14}u^{24} - 7.44 \times 10^{13}u^{23} + \dots + 6.05 \times 10^{14}a - 4.36 \times 10^{15} \rangle$$

(i) Arc colorings

$$\begin{aligned} a_8 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.396251u^{24} + 0.122894u^{23} + \dots - 11.2978u + 7.20665 \\ 0.0330975u^{24} - 0.0542359u^{23} + \dots + 2.37940u - 0.122894 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.417628u^{24} + 0.795035u^{23} + \dots + 7.05883u + 4.93555 \\ 0.231391u^{24} + 0.287294u^{23} + \dots + 8.32205u - 0.917929 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.396251u^{24} + 0.122894u^{23} + \dots - 11.2978u + 7.20665 \\ u \end{pmatrix} \\ a_3 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_4 &= \begin{pmatrix} 0.122894u^{24} + 0.0330975u^{23} + \dots + 4.03664u + 1.39625 \\ u^2 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 2.06508u^{24} + 0.405501u^{23} + \dots + 46.6705u - 2.21745 \\ 0.142970u^{24} - 0.157822u^{23} + \dots + 2.29680u - 0.772813 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -0.363154u^{24} + 0.0686576u^{23} + \dots - 9.91837u + 7.08376 \\ 0.0330975u^{24} - 0.0542359u^{23} + \dots + 2.37940u - 0.122894 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.190330u^{24} - 0.0224550u^{23} + \dots + 17.1015u + 2.98856 \\ -0.186231u^{24} - 0.288318u^{23} + \dots + 1.09172u - 0.332384 \end{pmatrix} \\ a_7 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.227555u^{24} + 0.490589u^{23} + \dots + 3.18314u + 5.44330 \\ 0.0413182u^{24} - 0.0171523u^{23} + \dots + 4.44636u - 0.410187 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.227555u^{24} + 0.490589u^{23} + \dots + 3.18314u + 5.44330 \\ 0.0413182u^{24} - 0.0171523u^{23} + \dots + 4.44636u - 0.410187 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.36183 - 0.94506I$		
$a = -0.263317 - 0.832190I$	$-9.79096 - 7.40216I$	$-7.26136 + 3.90619I$
$b = 0.52709 - 2.42294I$		
$u = -1.36183 + 0.94506I$		
$a = -0.263317 + 0.832190I$	$-9.79096 + 7.40216I$	$-7.26136 - 3.90619I$
$b = 0.52709 + 2.42294I$		
$u = -1.113724 - 0.401444I$		
$a = -0.234408 - 0.754921I$	$-3.12369 - 0.06362I$	$-5.51965 - 0.12740I$
$b = -0.69166 - 1.42578I$		
$u = -1.113724 + 0.401444I$		
$a = -0.234408 + 0.754921I$	$-3.12369 + 0.06362I$	$-5.51965 + 0.12740I$
$b = -0.69166 + 1.42578I$		
$u = -1.055804 - 0.669349I$		
$a = -0.469212 - 0.757255I$	$-3.62398 - 0.55768I$	$-7.12692 + 1.89809I$
$b = -0.29832 - 1.83739I$		
$u = -1.055804 + 0.669349I$		
$a = -0.469212 + 0.757255I$	$-3.62398 + 0.55768I$	$-7.12692 - 1.89809I$
$b = -0.29832 + 1.83739I$		
$u = -1.019350 - 0.663007I$		
$a = 0.593594 - 0.596790I$	$-4.81720 - 2.41116I$	$-4.79174 + 2.48268I$
$b = 0.143171 - 0.218436I$		
$u = -1.019350 + 0.663007I$		
$a = 0.593594 + 0.596790I$	$-4.81720 + 2.41116I$	$-4.79174 - 2.48268I$
$b = 0.143171 + 0.218436I$		
$u = -1.015419 - 0.130266I$		
$a = 0.83193 + 1.20740I$	$-7.96688 + 3.80546I$	$-9.00823 - 2.72232I$
$b = -0.491171 + 1.314251I$		
$u = -1.015419 + 0.130266I$		
$a = 0.83193 - 1.20740I$	$-7.96688 - 3.80546I$	$-9.00823 + 2.72232I$
$b = -0.491171 - 1.314251I$		

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.578442$ $a = 0.243739$ $b = -0.496888$	-0.898624	-11.0258
$u = 0.149236 - 0.123502I$ $a = 4.88788 + 2.29476I$ $b = 0.268131 - 0.287572I$	$1.91022 - 0.92265I$	$6.06720 + 6.51070I$
$u = 0.149236 + 0.123502I$ $a = 4.88788 - 2.29476I$ $b = 0.268131 + 0.287572I$	$1.91022 + 0.92265I$	$6.06720 - 6.51070I$
$u = 0.647135 - 0.820882I$ $a = -0.536581 - 0.115750I$ $b = 0.661020 - 0.221272I$	$3.61375 + 2.05944I$	$-4.90254 - 7.19693I$
$u = 0.647135 + 0.820882I$ $a = -0.536581 + 0.115750I$ $b = 0.661020 + 0.221272I$	$3.61375 - 2.05944I$	$-4.90254 + 7.19693I$
$u = 0.657268 - 0.350420I$ $a = 0.94713 - 1.32247I$ $b = 0.340946 - 1.195624I$	$-1.98209 - 2.65903I$	$-3.09005 + 4.34714I$
$u = 0.657268 + 0.350420I$ $a = 0.94713 + 1.32247I$ $b = 0.340946 + 1.195624I$	$-1.98209 + 2.65903I$	$-3.09005 - 4.34714I$
$u = 0.907003 - 0.057306I$ $a = -0.69801 + 1.60596I$ $b = 0.50201 + 1.33113I$	$-8.86649 + 2.64359I$	$-10.06958 - 2.50086I$
$u = 0.907003 + 0.057306I$ $a = -0.69801 - 1.60596I$ $b = 0.50201 - 1.33113I$	$-8.86649 - 2.64359I$	$-10.06958 + 2.50086I$
$u = 0.991209 - 0.696352I$ $a = -0.766008 - 0.588258I$ $b = -0.202015 + 0.068381I$	$-4.29953 + 9.06645I$	$-3.72304 - 7.02542I$

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.991209 + 0.696352I$ $a = -0.766008 + 0.588258I$ $b = -0.202015 - 0.068381I$	$-4.29953 - 9.06645I$	$-3.72304 + 7.02542I$
$u = 1.12346 - 1.07222I$ $a = 0.377394 - 0.626248I$ $b = -0.34283 - 2.05189I$	$1.38725 + 4.87941I$	$-6.34329 + 0.12140I$
$u = 1.12346 + 1.07222I$ $a = 0.377394 + 0.626248I$ $b = -0.34283 + 2.05189I$	$1.38725 - 4.87941I$	$-6.34329 - 0.12140I$
$u = 1.38003 - 0.93988I$ $a = 0.207747 - 0.871241I$ $b = -0.66793 - 2.36844I$	$-8.8717 + 15.0132I$	$-5.71790 - 7.82964I$
$u = 1.38003 + 0.93988I$ $a = 0.207747 + 0.871241I$ $b = -0.66793 + 2.36844I$	$-8.8717 - 15.0132I$	$-5.71790 + 7.82964I$

IV. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u+1)^{24}(u^{12} - 3u^{11} + \dots + 2u + 5)$ $(u^{25} - 22u^{24} + \dots + 40960u - 4096)$
c_2	$(u^{12} - 5u^{11} + \dots - 3u + 1)$ $(1 + 3u^2 + 3u^3 + 6u^4 + 8u^5 + 12u^6 + 16u^7 + 21u^8 + 20u^9 + 13u^{10} + 5u^{11} + u^{12})^2$ $(u^{25} - 8u^{24} + \dots - 3u + 2)$
c_3, c_7	$(u^{12} + u^{10} + 2u^9 + 4u^8 + 3u^7 + 5u^6 + 5u^5 + 6u^4 + 3u^3 + 3u^2 + 3u + 1)$ $(u^{24} + u^{23} + \dots + 4u + 1)(u^{25} - 7u^{23} + \dots - 8u - 1)$
c_4	$(u^{12} - u^{11} + \dots + 11u + 5)(u^{24} - u^{23} + \dots - 162u + 27)$ $(u^{25} + u^{24} + \dots - 80u - 85)$
c_5	1 $(1 + 3u^2 + 3u^3 + 6u^4 + 8u^5 + 12u^6 + 16u^7 + 21u^8 + 20u^9 + 13u^{10} + 5u^{11} + u^{12})^2$ $(u^{12} + 5u^{11} + \dots + 3u + 1)(u^{25} - 8u^{24} + \dots - 3u + 2)$
c_6	$(u^{12} + u^{10} - 3u^8 - u^7 - 2u^6 - 3u^5 + 9u^4 + 2u^3 - 4u^2 + 1)$ $(u^{24} + 3u^{23} + \dots + 400u + 109)(u^{25} + 15u^{23} + \dots - u + 1)$
c_8	1 $(1 + 2u - u^2 - 3u^3 + 10u^4 - 22u^5 + 28u^6 - 30u^7 + 25u^8 - 16u^9 + 9u^{10} - 3u^{11} + u^{12})^2$ $(u^{12} + 5u^{11} + \dots + 20u + 5)(u^{25} + 8u^{24} + \dots + 55u + 4)$
c_9	$(u^{12} + u^{10} - 3u^8 + u^7 - 2u^6 + 3u^5 + 9u^4 - 2u^3 - 4u^2 + 1)$ $(u^{24} + 3u^{23} + \dots + 400u + 109)(u^{25} + 15u^{23} + \dots - u + 1)$
c_{10}	$(u^{12} - 4u^{10} + u^9 + 9u^8 - u^7 - 10u^6 + u^5 + 7u^4 - 4u^3 + 2u^2 - 2u + 1)$ $(u^{24} + u^{23} + \dots - 774u + 135)(u^{25} - 8u^{23} + \dots - 18u + 28)$
c_{11}	$(u^{12} - 5u^{11} + \dots - 20u + 5)$ $(1 + 2u - u^2 - 3u^3 + 10u^4 - 22u^5 + 28u^6 - 30u^7 + 25u^8 - 16u^9 + 9u^{10} - 3u^{11} + u^{12})^2$ $(u^{25} + 8u^{24} + \dots + 55u + 4)$

V. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y-1)^{24}(y^{12} - 3y^{11} + \dots - 104y + 25)$ $(y^{25} - 4y^{24} + \dots + 92274688y - 16777216)$
c_2, c_5	1 $(1 + 6y + 21y^2 + 51y^3 + 102y^4 + 136y^5 + 100y^6 + 60y^7 + 45y^8 + 10y^9 + 11y^{10} + y^{11} + y^{12})^2$ $(y^{12} + 7y^{11} + \dots + 11y + 1)(y^{25} + 8y^{24} + \dots - 51y - 4)$
c_3, c_7	$(y^{12} + 2y^{11} + \dots - 3y + 1)(y^{24} + 3y^{23} + \dots - 8y + 1)$ $(y^{25} - 14y^{24} + \dots + 22y - 1)$
c_4	$(y^{12} - 7y^{11} + \dots - 11y + 25)(y^{24} - 21y^{23} + \dots + 93636y + 729)$ $(y^{25} - 23y^{24} + \dots + 73550y - 7225)$
c_6, c_9	$(y^{12} + 2y^{11} + \dots - 8y + 1)(y^{24} + 15y^{23} + \dots - 39228y + 11881)$ $(y^{25} + 30y^{24} + \dots + 3y - 1)$
c_8, c_{11}	$(y^{12} + 7y^{11} + \dots + 70y + 25)$ $(1 - 6y + 33y^2 + 115y^3 + 82y^4 - 72y^5 - 136y^6 - 44y^7 + 57y^8 + 70y^9 + 35y^{10} + 9y^{11} + y^{12})^2$ $(y^{25} + 16y^{24} + \dots + 753y - 16)$
c_{10}	$(y^{12} - 8y^{11} + \dots + 2y^2 + 1)(y^{24} - 17y^{23} + \dots - 49896y + 18225)$ $(y^{25} - 16y^{24} + \dots + 4188y - 784)$