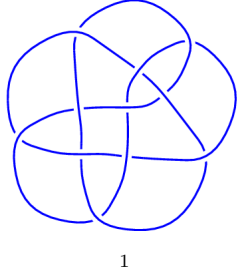
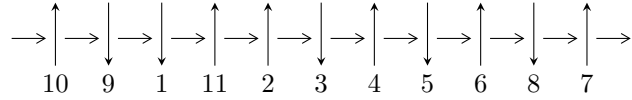


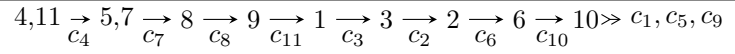
11a₂₆₆ (K11a₂₆₆)



Arc Sequences



Solving Sequence



Representation Ideals

$$I = \bigcap_{i=1}^4 I_i^u$$

$$\begin{aligned} I_1^u &= \langle 3b^4 + 4b^2 + 3b + 3, -6b^3 + 9b^2 - 5b + 11u + 18, 3b^3 + 12b^2 - 14b + 33a + 13 \rangle \\ I_2^u &= \langle u^{16} - 8u^{15} + \dots - 3u^2 + 1, -3013u^{15} + 22471u^{14} + \dots + 1751b + 4844, \\ &\quad - 4844u^{15} + 35739u^{14} + \dots + 1751a + 8173 \rangle \\ I_3^u &= \langle u^{30} - 19u^{29} + \dots - 288u + 32, \\ &\quad - 5.18165 \times 10^{13}u^{29} - 1.39954 \times 10^{15}u^{28} + \dots + 2.00092 \times 10^{15}b - 3.95097 \times 10^{16}, \\ &\quad 9.87743 \times 10^{15}u^{29} - 1.88086 \times 10^{17}u^{28} + \dots + 1.60074 \times 10^{16}a - 3.75598 \times 10^{17} \rangle \\ I_4^u &= \langle 3b^{94} + 15b^{93} + \dots - 14505b - 1083, \\ &\quad 8.17190 \times 10^{549}u + 5.23199 \times 10^{547}b^{93} + \dots - 1.27103 \times 10^{552}b - 9.49459 \times 10^{550}, \\ &\quad - 1.92735 \times 10^{549}b^{93} - 8.86068 \times 10^{549}b^{92} + \dots + 2.45157 \times 10^{550}a + 1.32966 \times 10^{552} \rangle \end{aligned}$$

There are 4 irreducible components with 144 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.

$$I_1^u = \langle 3b^4 + 4b^2 + 3b + 3, -6b^3 + 9b^2 - 5b + 11u + 18, 3b^3 + 12b^2 - 14b + 33a + 13 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.0909091b^3 - 0.363636b^2 + 0.424242b - 0.393939 \\ b \end{pmatrix} \\ a_5 &= \begin{pmatrix} 0.363636b^3 - 0.545455b^2 + 0.303030b + 0.909091 \\ -b^2 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0 \\ 0.545455b^3 - 0.818182b^2 + 0.454545b - 1.63636 \end{pmatrix} \\ a_8 &= \begin{pmatrix} 0.545455b^3 - 0.818182b^2 + 0.454545b - 1.63636 \\ 0.545455b^3 - 0.818182b^2 + 0.454545b - 1.63636 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 1.27273b^3 + 0.0909091b^2 + 1.06061b + 0.181818 \\ 1.18182b^3 - 0.272727b^2 + 1.81818b - 0.545455 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.0909091b^3 - 0.363636b^2 + 0.424242b - 0.393939 \\ -1.36364b^3 + 0.545455b^2 - 1.63636b - 0.909091 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -0.727273b^3 + 0.0909091b^2 - 0.606061b - 0.151515 \\ -0.818182b^3 + 1.72727b^2 - 2.18182b + 1.45455 \end{pmatrix} \\ a_2 &= \begin{pmatrix} 0.909091b^3 + 0.636364b^2 + 1.75758b - 0.0606061 \\ -0.272727b^3 + 1.90909b^2 + 0.272727b - 0.181818 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.151515b^3 + 0.272727b^2 - 0.707071b - 0.121212 \\ 1.27273b^3 + 0.0909091b^2 + 0.0606061b + 1.18182 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} b^3 + b^2 + \frac{4}{3}b + \frac{1}{3} \\ 1.09091b^3 + 1.36364b^2 + 1.90909b + 0.727273 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} b^3 + b^2 + \frac{4}{3}b + \frac{1}{3} \\ 1.09091b^3 + 1.36364b^2 + 1.90909b + 0.727273 \end{pmatrix} \end{aligned}$$

(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
$u = -1.50000 - 0.86603I$		
$a = -0.583749 - 0.456809I$	$-1.64493 + 6.08965I$	$2.5000 - 13.9526I$
$b = -0.480016 - 0.613405I$		
$u = -1.50000 + 0.86603I$		
$a = -0.583749 + 0.456809I$	$-1.64493 - 6.08965I$	$2.5000 + 13.9526I$
$b = -0.480016 + 0.613405I$		
$u = -1.50000 + 0.86603I$		
$a = 0.417083 - 0.168134I$	$-1.64493 - 6.08965I$	$2.5000 + 13.9526I$
$b = 0.480016 - 1.190755I$		
$u = -1.50000 - 0.86603I$		
$a = 0.417083 + 0.168134I$	$-1.64493 + 6.08965I$	$2.5000 - 13.9526I$
$b = 0.480016 + 1.190755I$		

$$\text{II. } I_2^u = \langle u^{16} - 8u^{15} + \dots - 3u^2 + 1, -3013u^{15} + 22471u^{14} + \dots + 1751b + 4844, -4844u^{15} + 35739u^{14} + \dots + 1751a + 8173 \rangle$$

(i) Arc colorings

$$\begin{aligned} a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 2.76642u^{15} - 20.4106u^{14} + \dots + 1.10623u - 4.66762 \\ 1.72073u^{15} - 12.8332u^{14} + \dots - 4.66762u - 2.76642 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 1.91034u^{15} - 14.0794u^{14} + \dots - 6.20617u - 5.80640 \\ 1.20331u^{15} - 9.11936u^{14} + \dots - 6.80640u - 1.91034 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_8 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_9 &= \begin{pmatrix} 3.70645u^{15} - 27.2153u^{14} + \dots - 8.84694u - 2.35979 \\ 2.19532u^{15} - 15.6933u^{14} + \dots - 2.06682u - 4.40263 \end{pmatrix} \\ a_1 &= \begin{pmatrix} 2.76642u^{15} - 20.4106u^{14} + \dots + 1.10623u - 4.66762 \\ 0.788121u^{15} - 5.70988u^{14} + \dots - 1.90120u - 1.04569 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 0.707025u^{15} - 4.96002u^{14} + \dots + 0.600228u - 3.89606 \\ 0.937179u^{15} - 7.08110u^{14} + \dots - 4.18903u - 0.0108509 \end{pmatrix} \\ a_2 &= \begin{pmatrix} -5.13478u^{15} + 37.7533u^{14} + \dots + 11.4672u + 4.55854 \\ -3.67276u^{15} + 26.2770u^{14} + \dots + 5.23015u + 5.72016 \end{pmatrix} \\ a_6 &= \begin{pmatrix} -1.51114u^{15} + 11.5220u^{14} + \dots + 6.78013u - 2.04283 \\ 0.0491148u^{15} - 0.0456882u^{14} + \dots - 2.54312u + 1.88121 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 2.17133u^{15} - 15.4152u^{14} + \dots + 2.15191u - 3.87950 \\ 1.12564u^{15} - 7.83781u^{14} + \dots - 3.62193u - 1.97830 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 2.17133u^{15} - 15.4152u^{14} + \dots + 2.15191u - 3.87950 \\ 1.12564u^{15} - 7.83781u^{14} + \dots - 3.62193u - 1.97830 \end{pmatrix} \end{aligned}$$

(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
$u = -0.814551 - 0.560407I$ $a = -0.383583 - 0.381679I$ $b = 0.098551 + 0.525860I$	$2.37780 + 3.65031I$	$5.77914 - 4.75975I$
$u = -0.814551 + 0.560407I$ $a = -0.383583 + 0.381679I$ $b = 0.098551 - 0.525860I$	$2.37780 - 3.65031I$	$5.77914 + 4.75975I$
$u = -0.233083 - 0.187405I$ $a = -2.22092 - 3.15779I$ $b = -0.074127 + 1.152242I$	$-1.67458 + 2.27154I$	$-1.49720 - 3.30379I$
$u = -0.233083 + 0.187405I$ $a = -2.22092 + 3.15779I$ $b = -0.074127 - 1.152242I$	$-1.67458 - 2.27154I$	$-1.49720 + 3.30379I$
$u = 0.275790 - 0.723292I$ $a = 1.02479 + 1.14628I$ $b = 1.111723 - 0.425093I$	$-3.41791 - 10.94268I$	$-2.27266 + 9.01140I$
$u = 0.275790 + 0.723292I$ $a = 1.02479 - 1.14628I$ $b = 1.111723 + 0.425093I$	$-3.41791 + 10.94268I$	$-2.27266 - 9.01140I$
$u = 0.656851$ $a = -3.16856$ $b = -2.08127$	2.63767	-12.2565
$u = 0.772109 - 1.166095I$ $a = -0.405436 + 0.424462I$ $b = 0.181922 + 0.800508I$	$-4.17810 + 2.37838I$	$-5.85782 - 3.30047I$
$u = 0.772109 + 1.166095I$ $a = -0.405436 - 0.424462I$ $b = 0.181922 - 0.800508I$	$-4.17810 - 2.37838I$	$-5.85782 + 3.30047I$
$u = 0.806733 - 1.141630I$ $a = -0.754142 + 0.044877I$ $b = -0.557159 + 0.897156I$	$-3.99183 - 4.14407I$	$-8.04295 + 6.13289I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.806733 + 1.141630I$ $a = -0.754142 - 0.044877I$ $b = -0.557159 - 0.897156I$	$-3.99183 + 4.14407I$	$-8.04295 - 6.13289I$
$u = 0.877139$ $a = 1.93092$ $b = 1.69369$	3.85452	16.3089
$u = 1.20245 - 1.45102I$ $a = 0.288986 - 0.037331I$ $b = 0.293323 - 0.464213I$	$0.40659 + 2.51099I$	$-3.33911 + 9.63855I$
$u = 1.20245 + 1.45102I$ $a = 0.288986 + 0.037331I$ $b = 0.293323 + 0.464213I$	$0.40659 - 2.51099I$	$-3.33911 - 9.63855I$
$u = 1.22356 - 0.97127I$ $a = -0.930879 + 0.286780I$ $b = -0.86044 + 1.25503I$	$-2.63766 - 10.07534I$	$0.70439 + 5.81996I$
$u = 1.22356 + 0.97127I$ $a = -0.930879 - 0.286780I$ $b = -0.86044 - 1.25503I$	$-2.63766 + 10.07534I$	$0.70439 - 5.81996I$

$$\text{III. } I_3^u = \langle u^{30} - 19u^{29} + \dots - 288u + 32, -5.18 \times 10^{13}u^{29} - 1.40 \times 10^{15}u^{28} + \dots + 2.00 \times 10^{15}b - 3.95 \times 10^{16}, 9.88 \times 10^{15}u^{29} - 1.88 \times 10^{17}u^{28} + \dots + 1.60 \times 10^{16}a - 3.76 \times 10^{17} \rangle$$

(i) Arc colorings

$$\begin{aligned} a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.617056u^{29} + 11.7500u^{28} + \dots - 184.336u + 23.4641 \\ 0.0258964u^{29} + 0.699449u^{28} + \dots - 154.248u + 19.7458 \end{pmatrix} \\ a_5 &= \begin{pmatrix} -0.162762u^{29} + 2.53113u^{28} + \dots - 53.0122u + 10.7183 \\ -0.561337u^{29} + 9.31571u^{28} + \dots - 37.1570u + 5.20837 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_8 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_9 &= \begin{pmatrix} 2.83400u^{29} - 50.6803u^{28} + \dots + 606.094u - 74.7838 \\ 4.18132u^{29} - 75.2895u^{28} + \dots + 956.700u - 115.915 \end{pmatrix} \\ a_1 &= \begin{pmatrix} -0.617056u^{29} + 11.7500u^{28} + \dots - 184.336u + 23.4641 \\ -1.16558u^{29} + 20.5922u^{28} + \dots - 181.452u + 20.5745 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 0.398575u^{29} - 6.78457u^{28} + \dots - 15.8552u + 5.50993 \\ -0.227356u^{29} + 4.27889u^{28} + \dots - 94.9937u + 12.4731 \end{pmatrix} \\ a_2 &= \begin{pmatrix} 1.09621u^{29} - 17.4984u^{28} + \dots - 39.4401u + 8.52082 \\ 0.878801u^{29} - 13.4911u^{28} + \dots - 106.990u + 14.6412 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 1.34732u^{29} - 24.6092u^{28} + \dots + 350.606u - 41.1316 \\ 0.611146u^{29} - 10.6592u^{28} + \dots + 158.912u - 18.7114 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.936834u^{29} - 16.1865u^{28} + \dots + 130.777u - 13.8346 \\ 1.57979u^{29} - 27.2371u^{28} + \dots + 160.866u - 17.5529 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.936834u^{29} - 16.1865u^{28} + \dots + 130.777u - 13.8346 \\ 1.57979u^{29} - 27.2371u^{28} + \dots + 160.866u - 17.5529 \end{pmatrix} \end{aligned}$$

(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
$u = -0.70202 - 1.35483I$		
$a = 0.168744 + 0.101365I$	$0.40807 - 2.90881I$	$-2.85373 + 9.86808I$
$b = 0.018870 - 0.299780I$		
$u = -0.70202 + 1.35483I$		
$a = 0.168744 - 0.101365I$	$0.40807 + 2.90881I$	$-2.85373 - 9.86808I$
$b = 0.018870 + 0.299780I$		
$u = -0.546613 - 0.065532I$		
$a = 0.485420 - 0.807513I$	$-0.89506 + 1.64854I$	$-1.59568 - 3.27710I$
$b = -0.318255 + 0.409587I$		
$u = -0.546613 + 0.065532I$		
$a = 0.485420 + 0.807513I$	$-0.89506 - 1.64854I$	$-1.59568 + 3.27710I$
$b = -0.318255 - 0.409587I$		
$u = 0.066198 - 0.347931I$		
$a = 3.33738 - 0.23755I$	$-5.36512 - 5.09529I$	$-5.99835 + 3.87317I$
$b = 0.138276 - 1.176903I$		
$u = 0.066198 + 0.347931I$		
$a = 3.33738 + 0.23755I$	$-5.36512 + 5.09529I$	$-5.99835 - 3.87317I$
$b = 0.138276 + 1.176903I$		
$u = 0.118097 - 0.913974I$		
$a = -0.980785 + 0.224045I$	$-4.05984 + 4.16834I$	$-7.21533 - 9.98736I$
$b = 0.088944 + 0.922871I$		
$u = 0.118097 + 0.913974I$		
$a = -0.980785 - 0.224045I$	$-4.05984 - 4.16834I$	$-7.21533 + 9.98736I$
$b = 0.088944 - 0.922871I$		
$u = 0.225426 - 0.690735I$		
$a = -0.870847 - 0.960710I$	$-1.89594 - 2.12626I$	$-1.09090 + 3.98101I$
$b = -0.859908 + 0.384955I$		
$u = 0.225426 + 0.690735I$		
$a = -0.870847 + 0.960710I$	$-1.89594 + 2.12626I$	$-1.09090 - 3.98101I$
$b = -0.859908 - 0.384955I$		

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.48241 - 1.42439I$ $a = -0.515210 + 0.188045I$ $b = 0.019306 + 0.824574I$	$-5.55355 + 1.97987I$	$-14.2442 - 2.1459I$
$u = 0.48241 + 1.42439I$ $a = -0.515210 - 0.188045I$ $b = 0.019306 - 0.824574I$	$-5.55355 - 1.97987I$	$-14.2442 + 2.1459I$
$u = 0.758038 - 0.703052I$ $a = 1.55468 - 0.22638I$ $b = 1.01935 - 1.26462I$	$-5.97727 + 1.40898I$	$-5.70108 + 0.75330I$
$u = 0.758038 + 0.703052I$ $a = 1.55468 + 0.22638I$ $b = 1.01935 + 1.26462I$	$-5.97727 - 1.40898I$	$-5.70108 - 0.75330I$
$u = 0.82135 - 1.49793I$ $a = 0.306254 - 0.359706I$ $b = -0.287272 - 0.754189I$	$-5.60137 + 11.70804I$	$-5.19142 - 9.20899I$
$u = 0.82135 + 1.49793I$ $a = 0.306254 + 0.359706I$ $b = -0.287272 + 0.754189I$	$-5.60137 - 11.70804I$	$-5.19142 + 9.20899I$
$u = 0.915628 - 0.496872I$ $a = 0.880016 - 0.076391I$ $b = 0.767811 - 0.507201I$	$1.54778 - 0.98121I$	$6.08132 + 1.87254I$
$u = 0.915628 + 0.496872I$ $a = 0.880016 + 0.076391I$ $b = 0.767811 + 0.507201I$	$1.54778 + 0.98121I$	$6.08132 - 1.87254I$
$u = 1.040761 - 0.325585I$ $a = 0.157218 - 1.220586I$ $b = -0.233778 - 1.321527I$	$-5.17774 - 5.90499I$	$-5.32978 + 5.57457I$
$u = 1.040761 + 0.325585I$ $a = 0.157218 + 1.220586I$ $b = -0.233778 + 1.321527I$	$-5.17774 + 5.90499I$	$-5.32978 - 5.57457I$

Solution to I_3^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.18063 - 0.86676I$		
$a = 0.882838 - 0.145464I$	$3.99955 - 4.35128I$	$6.59095 + 3.41349I$
$b = 0.916228 - 0.936945I$		
$u = 1.18063 + 0.86676I$		
$a = 0.882838 + 0.145464I$	$3.99955 + 4.35128I$	$6.59095 - 3.41349I$
$b = 0.916228 + 0.936945I$		
$u = 1.200334 - 0.708116I$		
$a = -1.124048 + 0.541957I$	$-1.09814 - 9.90729I$	$4.86863 + 11.92532I$
$b = -0.96546 + 1.44649I$		
$u = 1.200334 + 0.708116I$		
$a = -1.124048 - 0.541957I$	$-1.09814 + 9.90729I$	$4.86863 - 11.92532I$
$b = -0.96546 - 1.44649I$		
$u = 1.20710 - 1.01760I$		
$a = 1.007442 - 0.230094I$	$-4.2629 - 20.2286I$	$-1.00488 + 10.53851I$
$b = 0.98194 - 1.30292I$		
$u = 1.20710 + 1.01760I$		
$a = 1.007442 + 0.230094I$	$-4.2629 + 20.2286I$	$-1.00488 - 10.53851I$
$b = 0.98194 + 1.30292I$		
$u = 1.33161 - 1.00419I$		
$a = -0.822863 + 0.339582I$	$-3.10815 - 10.44340I$	$-10.9618 + 15.8226I$
$b = -0.75472 + 1.27850I$		
$u = 1.33161 + 1.00419I$		
$a = -0.822863 - 0.339582I$	$-3.10815 + 10.44340I$	$-10.9618 - 15.8226I$
$b = -0.75472 - 1.27850I$		
$u = 1.40106 - 1.04994I$		
$a = -0.466238 + 0.116100I$	$2.49609 - 5.04306I$	$4.14627 + 10.34955I$
$b = -0.531326 + 0.652185I$		
$u = 1.40106 + 1.04994I$		
$a = -0.466238 - 0.116100I$	$2.49609 + 5.04306I$	$4.14627 - 10.34955I$
$b = -0.531326 - 0.652185I$		

$$\text{IV. } I_4^u = \langle 3b^{94} + 15b^{93} + \dots - 14505b - 1083, 8.17 \times 10^{549}u + 5.23 \times 10^{547}b^{93} + \dots - 1.27 \times 10^{552}b - 9.49 \times 10^{550}, -1.93 \times 10^{549}b^{93} - 8.86 \times 10^{549}b^{92} + \dots + 2.45 \times 10^{550}a + 1.33 \times 10^{552} \rangle$$

(i) Arc colorings

$$\begin{aligned} a_4 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} 0.0786170b^{93} + 0.361429b^{92} + \dots - 671.368b - 54.2370 \\ b \end{pmatrix} \\ a_5 &= \begin{pmatrix} 0.0316562b^{93} + 0.146350b^{92} + \dots - 325.876b - 27.3807 \\ -b^2 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0 \\ -0.00640241b^{93} - 0.0354286b^{92} + \dots + 155.537b + 11.6186 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -0.00640241b^{93} - 0.0354286b^{92} + \dots + 155.537b + 11.6186 \\ -0.00640241b^{93} - 0.0354286b^{92} + \dots + 155.537b + 11.6186 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.0405508b^{93} + 0.191268b^{92} + \dots - 424.877b - 34.0508 \\ -0.00359727b^{93} - 0.0220380b^{92} + \dots + 135.635b + 10.4370 \end{pmatrix} \\ a_1 &= \begin{pmatrix} 0.0786170b^{93} + 0.361429b^{92} + \dots - 671.368b - 54.2370 \\ 0.0146129b^{93} + 0.0673372b^{92} + \dots - 100.467b - 8.68691 \end{pmatrix} \\ a_3 &= \begin{pmatrix} 0.0397851b^{93} + 0.177041b^{92} + \dots - 190.472b - 12.2057 \\ 0.00213599b^{93} + 0.00243486b^{92} + \dots + 91.0863b + 6.54978 \end{pmatrix} \\ a_2 &= \begin{pmatrix} 0.0314439b^{93} + 0.138318b^{92} + \dots - 130.339b - 6.46482 \\ 0.00747393b^{93} + 0.0342388b^{92} + \dots - 66.2769b - 6.03243 \end{pmatrix} \\ a_6 &= \begin{pmatrix} 0.0469659b^{93} + 0.227155b^{92} + \dots - 607.535b - 54.9257 \\ 0.00279924b^{93} + 0.0154689b^{92} + \dots - 27.9821b - 3.17255 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.0849849b^{93} + 0.390552b^{92} + \dots - 747.077b - 61.8800 \\ 0.00636788b^{93} + 0.0291233b^{92} + \dots - 74.7084b - 7.64300 \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.0849849b^{93} + 0.390552b^{92} + \dots - 747.077b - 61.8800 \\ 0.00636788b^{93} + 0.0291233b^{92} + \dots - 74.7084b - 7.64300 \end{pmatrix} \end{aligned}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.757040$ $a = -2.31824$ $b = -2.25394$	3.08221	9.23067
$u = 0.053079 + 0.373306I$ $a = -0.336548 + 1.167527I$ $b = -2.13877 - 0.70149I$	$-1.67841 + 1.93955I$	$15.1921 - 13.7852I$
$u = 0.053079 - 0.373306I$ $a = -0.336548 - 1.167527I$ $b = -2.13877 + 0.70149I$	$-1.67841 - 1.93955I$	$15.1921 + 13.7852I$
$u = 0.482594 - 0.355179I$ $a = -1.65589 - 0.22590I$ $b = -1.61606 - 0.59445I$	$-1.98777 - 3.16700I$	$-4.3128 + 13.8397I$
$u = 0.482594 + 0.355179I$ $a = -1.65589 + 0.22590I$ $b = -1.61606 + 0.59445I$	$-1.98777 + 3.16700I$	$-4.3128 - 13.8397I$
$u = -0.818561 - 0.837650I$ $a = -1.234982 - 0.200385I$ $b = -1.10362 - 1.20641I$	$-5.08486 + 6.93394I$	$-6.67195 - 7.26599I$
$u = -0.818561 + 0.837650I$ $a = -1.234982 + 0.200385I$ $b = -1.10362 + 1.20641I$	$-5.08486 - 6.93394I$	$-6.67195 + 7.26599I$
$u = -1.070774 - 0.671723I$ $a = -1.070373 - 0.461159I$ $b = -0.958668 - 0.712289I$	$-0.08320 + 5.80714I$	$5.40752 - 6.37276I$
$u = -1.070774 + 0.671723I$ $a = -1.070373 + 0.461159I$ $b = -0.958668 + 0.712289I$	$-0.08320 - 5.80714I$	$5.40752 + 6.37276I$
$u = -1.13715 - 0.99385I$ $a = -1.089810 - 0.218204I$ $b = -0.94020 - 1.19251I$	$-3.74054 + 11.30755I$	$-5.50352 - 11.29218I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.13715 + 0.99385I$ $a = -1.089810 + 0.218204I$ $b = -0.94020 + 1.19251I$	$-3.74054 - 11.30755I$	$-5.50352 + 11.29218I$
$u = -0.652087 - 0.253975I$ $a = -2.11561 + 1.71319I$ $b = -0.936652 - 0.569551I$	$-2.00176 + 11.29875I$	$3.86102 - 10.57011I$
$u = -0.652087 + 0.253975I$ $a = -2.11561 - 1.71319I$ $b = -0.936652 + 0.569551I$	$-2.00176 - 11.29875I$	$3.86102 + 10.57011I$
$u = -0.618555 + 0.355905I$ $a = -1.39832 + 0.73211I$ $b = -0.899081 - 0.336787I$	$-0.26046 - 4.20130I$	$2.88530 + 9.27658I$
$u = -0.618555 - 0.355905I$ $a = -1.39832 - 0.73211I$ $b = -0.899081 + 0.336787I$	$-0.26046 + 4.20130I$	$2.88530 - 9.27658I$
$u = -0.514809 - 0.936848I$ $a = -0.763231 - 0.299947I$ $b = -0.89733 - 1.22784I$	$-5.74704 + 2.00651I$	$-10.31615 - 2.77027I$
$u = -0.514809 + 0.936848I$ $a = -0.763231 + 0.299947I$ $b = -0.89733 + 1.22784I$	$-5.74704 - 2.00651I$	$-10.31615 + 2.77027I$
$u = 0.482594 + 0.355179I$ $a = -1.58409 + 2.39763I$ $b = -0.879356 - 0.479120I$	$-1.98777 + 3.16700I$	$-4.3128 - 13.8397I$
$u = 0.482594 - 0.355179I$ $a = -1.58409 - 2.39763I$ $b = -0.879356 + 0.479120I$	$-1.98777 - 3.16700I$	$-4.3128 + 13.8397I$
$u = 0.805900 - 0.453398I$ $a = -0.734775 - 0.125038I$ $b = -0.866819 - 0.843977I$	$1.44210 - 5.12633I$	$2.94088 + 9.83860I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.805900 + 0.453398I$ $a = -0.734775 + 0.125038I$ $b = -0.866819 + 0.843977I$	$1.44210 + 5.12633I$	$2.94088 - 9.83860I$
$u = -0.629670 + 0.016055I$ $a = -1.68452 + 1.55954I$ $b = -0.798496 - 0.222976I$	$3.87155 - 2.62212I$	$10.88486 + 3.68775I$
$u = -0.629670 - 0.016055I$ $a = -1.68452 - 1.55954I$ $b = -0.798496 + 0.222976I$	$3.87155 + 2.62212I$	$10.88486 - 3.68775I$
$u = -1.12892 - 1.06195I$ $a = -0.884866 + 0.104404I$ $b = -0.796556 - 1.025075I$	$0.77111 + 11.39919I$	$2.82858 - 11.01059I$
$u = -1.12892 + 1.06195I$ $a = -0.884866 - 0.104404I$ $b = -0.796556 + 1.025075I$	$0.77111 - 11.39919I$	$2.82858 + 11.01059I$
$u = 0.805900 + 0.453398I$ $a = -0.369468 + 1.255109I$ $b = -0.648847 - 0.232377I$	$1.44210 + 5.12633I$	$2.94088 - 9.83860I$
$u = 0.805900 - 0.453398I$ $a = -0.369468 - 1.255109I$ $b = -0.648847 + 0.232377I$	$1.44210 - 5.12633I$	$2.94088 + 9.83860I$
$u = 0.605265 + 1.174812I$ $a = -0.405523 - 0.170320I$ $b = -0.639115 - 1.105943I$	$-4.45949 + 2.25311I$	$-9.64335 - 2.44283I$
$u = 0.605265 - 1.174812I$ $a = -0.405523 + 0.170320I$ $b = -0.639115 + 1.105943I$	$-4.45949 - 2.25311I$	$-9.64335 + 2.44283I$
$u = 1.22570 + 1.22664I$ $a = -0.448643 - 0.008380I$ $b = -0.574714 - 1.055860I$	$-2.23455 + 6.04607I$	$-9.9274 - 11.4207I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.22570 - 1.22664I$		
$a = -0.448643 + 0.008380I$	$-2.23455 - 6.04607I$	$-9.9274 + 11.4207I$
$b = -0.574714 + 1.055860I$		
$u = -1.35575 - 1.02244I$		
$a = -0.596350 - 0.410664I$	$-2.60428 + 5.02841I$	$-3.35135 - 8.52552I$
$b = -0.569928 - 0.715005I$		
$u = -1.35575 + 1.02244I$		
$a = -0.596350 + 0.410664I$	$-2.60428 - 5.02841I$	$-3.35135 + 8.52552I$
$b = -0.569928 + 0.715005I$		
$u = 1.22570 + 1.22664I$		
$a = -0.664979 - 0.195943I$	$-2.23455 + 6.04607I$	$-9.9274 - 11.4207I$
$b = -0.539623 - 0.560596I$		
$u = 1.22570 - 1.22664I$		
$a = -0.664979 + 0.195943I$	$-2.23455 - 6.04607I$	$-9.9274 + 11.4207I$
$b = -0.539623 + 0.560596I$		
$u = -0.621232 - 0.200124I$		
$a = 0.115956 - 0.480776I$	$-1.33437 - 1.73522I$	$1.73147 - 1.18204I$
$b = -0.50509 - 1.43287I$		
$u = -0.621232 + 0.200124I$		
$a = 0.115956 + 0.480776I$	$-1.33437 + 1.73522I$	$1.73147 + 1.18204I$
$b = -0.50509 + 1.43287I$		
$u = 0.053079 + 0.373306I$		
$a = -2.64036 + 5.35383I$	$-1.67841 + 1.93955I$	$15.1921 - 13.7852I$
$b = -0.453709 - 0.063664I$		
$u = 0.053079 - 0.373306I$		
$a = -2.64036 - 5.35383I$	$-1.67841 - 1.93955I$	$15.1921 + 13.7852I$
$b = -0.453709 + 0.063664I$		
$u = -0.84453 + 1.32043I$		
$a = 0.406152 - 0.347547I$	$-4.71436 + 3.28575I$	$-12.0478 - 10.0322I$
$b = -0.365705 - 0.694890I$		

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.84453 - 1.32043I$ $a = 0.406152 + 0.347547I$ $b = -0.365705 + 0.694890I$	$-4.71436 - 3.28575I$	$-12.0478 + 10.0322I$
$u = -1.048211 + 0.669398I$ $a = 0.250476 - 0.625091I$ $b = -0.352779 - 1.012222I$	$-4.37399 + 1.07626I$	$-9.22616 + 2.29912I$
$u = -1.048211 - 0.669398I$ $a = 0.250476 + 0.625091I$ $b = -0.352779 + 1.012222I$	$-4.37399 - 1.07626I$	$-9.22616 - 2.29912I$
$u = -1.30130 - 1.15710I$ $a = -0.231845 + 0.137983I$ $b = -0.350949 - 0.607158I$	$0.65352 - 2.88892I$	$10.73565 + 8.41815I$
$u = -1.30130 + 1.15710I$ $a = -0.231845 - 0.137983I$ $b = -0.350949 + 0.607158I$	$0.65352 + 2.88892I$	$10.73565 - 8.41815I$
$u = 1.51699 + 0.20467I$ $a = -0.127332 - 0.221844I$ $b = -0.228638 - 1.317032I$	$-1.20562 + 5.42950I$	$5.73944 - 6.25923I$
$u = 1.51699 - 0.20467I$ $a = -0.127332 + 0.221844I$ $b = -0.228638 + 1.317032I$	$-1.20562 - 5.42950I$	$5.73944 + 6.25923I$
$u = -0.621232 + 0.200124I$ $a = 1.40977 - 1.85235I$ $b = -0.168251 - 0.275468I$	$-1.33437 + 1.73522I$	$1.73147 + 1.18204I$
$u = -0.621232 - 0.200124I$ $a = 1.40977 + 1.85235I$ $b = -0.168251 + 0.275468I$	$-1.33437 - 1.73522I$	$1.73147 - 1.18204I$
$u = 1.51699 + 0.20467I$ $a = -0.263065 - 0.832697I$ $b = -0.147756 - 0.362596I$	$-1.20562 + 5.42950I$	$5.73944 - 6.25923I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.51699 - 0.20467I$ $a = -0.263065 + 0.832697I$ $b = -0.147756 + 0.362596I$	$-1.20562 - 5.42950I$	$5.73944 + 6.25923I$
$u = 0.605265 + 1.174812I$ $a = -0.965406 + 0.046636I$ $b = -0.045355 - 0.579502I$	$-4.45949 + 2.25311I$	$-9.64335 - 2.44283I$
$u = 0.605265 - 1.174812I$ $a = -0.965406 - 0.046636I$ $b = -0.045355 + 0.579502I$	$-4.45949 - 2.25311I$	$-9.64335 + 2.44283I$
$u = 0.472704 - 0.956320I$ $a = 1.55642 + 0.37675I$ $b = 0.067556 - 0.751847I$	$-5.61718 - 10.70298I$	$-5.64531 + 8.75378I$
$u = 0.472704 + 0.956320I$ $a = 1.55642 - 0.37675I$ $b = 0.067556 + 0.751847I$	$-5.61718 + 10.70298I$	$-5.64531 - 8.75378I$
$u = -0.514809 + 0.936848I$ $a = 1.41090 + 0.18251I$ $b = 0.111914 - 0.869447I$	$-5.74704 - 2.00651I$	$-10.31615 + 2.77027I$
$u = -0.514809 - 0.936848I$ $a = 1.41090 - 0.18251I$ $b = 0.111914 + 0.869447I$	$-5.74704 + 2.00651I$	$-10.31615 - 2.77027I$
$u = -0.84453 - 1.32043I$ $a = -0.247766 - 0.435426I$ $b = 0.115904 - 0.829812I$	$-4.71436 - 3.28575I$	$-12.0478 + 10.0322I$
$u = -0.84453 + 1.32043I$ $a = -0.247766 + 0.435426I$ $b = 0.115904 + 0.829812I$	$-4.71436 + 3.28575I$	$-12.0478 - 10.0322I$
$u = -1.048211 - 0.669398I$ $a = -0.198981 - 0.838595I$ $b = 0.155883 - 0.822895I$	$-4.37399 - 1.07626I$	$-9.22616 - 2.29912I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.048211 + 0.669398I$ $a = -0.198981 + 0.838595I$ $b = 0.155883 + 0.822895I$	$-4.37399 + 1.07626I$	$-9.22616 + 2.29912I$
$u = -1.35575 + 1.02244I$ $a = 0.521505 - 0.134095I$ $b = 0.388625 - 1.166489I$	$-2.60428 - 5.02841I$	$-3.35135 + 8.52552I$
$u = -1.35575 - 1.02244I$ $a = 0.521505 + 0.134095I$ $b = 0.388625 + 1.166489I$	$-2.60428 + 5.02841I$	$-3.35135 - 8.52552I$
$u = 0.539485 - 1.107736I$ $a = 0.582391 + 0.876854I$ $b = 0.401942 - 0.724037I$	$-0.215372 + 0.545445I$	$3.71028 - 0.03483I$
$u = 0.539485 + 1.107736I$ $a = 0.582391 - 0.876854I$ $b = 0.401942 + 0.724037I$	$-0.215372 - 0.545445I$	$3.71028 + 0.03483I$
$u = -1.30130 + 1.15710I$ $a = 0.382299 - 0.126642I$ $b = 0.461361 - 0.088710I$	$0.65352 + 2.88892I$	$10.73565 - 8.41815I$
$u = -1.30130 - 1.15710I$ $a = 0.382299 + 0.126642I$ $b = 0.461361 + 0.088710I$	$0.65352 - 2.88892I$	$10.73565 + 8.41815I$
$u = -0.618555 + 0.355905I$ $a = 0.856636 + 1.037367I$ $b = 0.604374 - 0.950521I$	$-0.26046 - 4.20130I$	$2.88530 + 9.27658I$
$u = -0.618555 - 0.355905I$ $a = 0.856636 - 1.037367I$ $b = 0.604374 + 0.950521I$	$-0.26046 + 4.20130I$	$2.88530 - 9.27658I$
$u = 0.506870 + 0.008508I$ $a = 4.52767 + 1.22416I$ $b = 0.654491 - 0.229597I$	$-1.52745 - 1.61554I$	$-1.60105 - 0.11717I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.506870 - 0.008508I$		
$a = 4.52767 - 1.22416I$	$-1.52745 + 1.61554I$	$-1.60105 + 0.11717I$
$b = 0.654491 + 0.229597I$		
$u = -1.070774 + 0.671723I$		
$a = 0.941924 - 0.074317I$	$-0.08320 - 5.80714I$	$5.40752 + 6.37276I$
$b = 0.83636 - 1.21279I$		
$u = -1.070774 - 0.671723I$		
$a = 0.941924 + 0.074317I$	$-0.08320 + 5.80714I$	$5.40752 - 6.37276I$
$b = 0.83636 + 1.21279I$		
$u = -0.818561 + 0.837650I$		
$a = 1.395302 - 0.045980I$	$-5.08486 - 6.93394I$	$-6.67195 + 7.26599I$
$b = 0.84306 - 1.19851I$		
$u = -0.818561 - 0.837650I$		
$a = 1.395302 + 0.045980I$	$-5.08486 + 6.93394I$	$-6.67195 - 7.26599I$
$b = 0.84306 + 1.19851I$		
$u = 0.911487 - 0.184056I$		
$a = 1.025633 + 0.074613I$	$1.93536 - 0.83864I$	$6.21439 + 1.02495I$
$b = 0.932887 - 0.559511I$		
$u = 0.911487 + 0.184056I$		
$a = 1.025633 - 0.074613I$	$1.93536 + 0.83864I$	$6.21439 - 1.02495I$
$b = 0.932887 + 0.559511I$		
$u = 0.911487 - 0.184056I$		
$a = 1.102476 - 0.391221I$	$1.93536 - 0.83864I$	$6.21439 + 1.02495I$
$b = 0.948584 - 0.120765I$		
$u = 0.911487 + 0.184056I$		
$a = 1.102476 + 0.391221I$	$1.93536 + 0.83864I$	$6.21439 - 1.02495I$
$b = 0.948584 + 0.120765I$		
$u = -1.13715 + 0.99385I$		
$a = 0.988376 - 0.184864I$	$-3.74054 - 11.30755I$	$-5.50352 + 11.29218I$
$b = 1.02241 - 1.33124I$		

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.13715 - 0.99385I$ $a = 0.988376 + 0.184864I$ $b = 1.02241 + 1.33124I$	$-3.74054 + 11.30755I$	$-5.50352 - 11.29218I$
$u = -0.629670 + 0.016055I$ $a = 1.258271 + 0.386198I$ $b = 1.03565 - 1.00904I$	$3.87155 - 2.62212I$	$10.88486 + 3.68775I$
$u = -0.629670 - 0.016055I$ $a = 1.258271 - 0.386198I$ $b = 1.03565 + 1.00904I$	$3.87155 + 2.62212I$	$10.88486 - 3.68775I$
$u = 0.472704 - 0.956320I$ $a = 0.659879 - 0.255533I$ $b = 1.09602 - 1.31035I$	$-5.61718 - 10.70298I$	$-5.64531 + 8.75378I$
$u = 0.472704 + 0.956320I$ $a = 0.659879 + 0.255533I$ $b = 1.09602 + 1.31035I$	$-5.61718 + 10.70298I$	$-5.64531 - 8.75378I$
$u = -1.12892 + 1.06195I$ $a = 0.827502 - 0.129601I$ $b = 1.109816 - 0.821819I$	$0.77111 - 11.39919I$	$2.82858 + 11.01059I$
$u = -1.12892 - 1.06195I$ $a = 0.827502 + 0.129601I$ $b = 1.109816 + 0.821819I$	$0.77111 + 11.39919I$	$2.82858 - 11.01059I$
$u = 0.539485 - 1.107736I$ $a = 0.671147 + 0.035991I$ $b = 1.285514 - 0.172086I$	$-0.215372 + 0.545445I$	$3.71028 - 0.03483I$
$u = 0.539485 + 1.107736I$ $a = 0.671147 - 0.035991I$ $b = 1.285514 + 0.172086I$	$-0.215372 - 0.545445I$	$3.71028 + 0.03483I$
$u = -0.757040$ $a = 2.97730$ $b = 1.75500$	3.08221	9.23067

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.652087 - 0.253975I$	$-2.00176 + 11.29875I$	$3.86102 - 10.57011I$
$a = 1.54257 + 0.27262I$		
$b = 1.81467 - 0.57983I$		
$u = -0.652087 + 0.253975I$	$-2.00176 - 11.29875I$	$3.86102 + 10.57011I$
$a = 1.54257 - 0.27262I$		
$b = 1.81467 + 0.57983I$		
$u = 0.506870 - 0.008508I$	$-1.52745 + 1.61554I$	$-1.60105 + 0.11717I$
$a = 1.283276 + 0.474511I$		
$b = 2.28452 - 0.65901I$		
$u = 0.506870 + 0.008508I$	$-1.52745 - 1.61554I$	$-1.60105 - 0.11717I$
$a = 1.283276 - 0.474511I$		
$b = 2.28452 + 0.65901I$		

V. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u+1)^4(u^{16} - 9u^{15} + \dots - 33u + 9)$ $(u^{30} - 26u^{29} + \dots - 12288u + 1024)$ $(27 + 193u + 911u^2 + 3087u^3 + 8926u^4 + 2.24 \times 10^4 u^5 + 5.12 \times 10^4 u^6 + 1.06 \times 10^5 u^7 + 2.06 \times 10^5 u^8 + 1.39 \times 10^6 u^9 - 1.39 \times 10^4 u^{10} - 1.39 \times 10^4 u^{11} - 1.39 \times 10^4 u^{12} - 1.39 \times 10^4 u^{13} - 1.39 \times 10^4 u^{14} - 1.39 \times 10^4 u^{15} - 1.39 \times 10^4 u^{16} - 1.39 \times 10^4 u^{17} - 1.39 \times 10^4 u^{18} - 1.39 \times 10^4 u^{19} - 1.39 \times 10^4 u^{20} - 1.39 \times 10^4 u^{21} - 1.39 \times 10^4 u^{22} - 1.39 \times 10^4 u^{23} - 1.39 \times 10^4 u^{24} - 1.39 \times 10^4 u^{25} - 1.39 \times 10^4 u^{26} - 1.39 \times 10^4 u^{27} - 1.39 \times 10^4 u^{28} - 1.39 \times 10^4 u^{29} - 1.39 \times 10^4 u^{30})$
c_2	$(u^2 + 3u + 3)^2(u^{16} - 6u^{15} + \dots + u + 1)$ $(u^{30} + 29u^{29} + \dots + 5632u + 512)$ $(-3 + 30u - 127u^2 + 228u^3 + 210u^4 - 1872u^5 + 2748u^6 + 3857u^7 - 1.88 \times 10^4 u^8 + 1.89 \times 10^4 u^9 - 1.39 \times 10^4 u^{10} - 1.39 \times 10^4 u^{11} - 1.39 \times 10^4 u^{12} - 1.39 \times 10^4 u^{13} - 1.39 \times 10^4 u^{14} - 1.39 \times 10^4 u^{15} - 1.39 \times 10^4 u^{16} - 1.39 \times 10^4 u^{17} - 1.39 \times 10^4 u^{18} - 1.39 \times 10^4 u^{19} - 1.39 \times 10^4 u^{20} - 1.39 \times 10^4 u^{21} - 1.39 \times 10^4 u^{22} - 1.39 \times 10^4 u^{23} - 1.39 \times 10^4 u^{24} - 1.39 \times 10^4 u^{25} - 1.39 \times 10^4 u^{26} - 1.39 \times 10^4 u^{27} - 1.39 \times 10^4 u^{28} - 1.39 \times 10^4 u^{29} - 1.39 \times 10^4 u^{30})$
c_3, c_{10}	$(3u^4 + 3u^3 + \dots - 5u + 1)(u^{16} + 4u^{15} + \dots + 2u - 1)$ $(u^{30} - u^{28} + \dots - 6u + 1)(3u^{94} + 24u^{93} + \dots + 45u - 1)$
c_4	$(3u^4 + 4u^2 + 3u + 3)(u^{16} - u^{14} + \dots + 3u - 1)(u^{30} + 8u^{28} + \dots + 3u + 1)$ $(3u^{94} + 15u^{93} + \dots - 14505u - 1083)$
c_5	$(3u^4 + 4u^2 + 3u + 3)(u^{16} + u^{15} + \dots + u^2 - 1)(u^{30} - u^{29} + \dots - 2u + 1)$ $(3u^{94} + 3u^{93} + \dots - 93u - 3)$
c_6	$(3u^4 - 3u^3 + \dots + 2u + 7)(u^{16} + u^{15} + \dots + 2u - 1)$ $(u^{30} - u^{29} + \dots + 46u + 27)$ $(3u^{94} + 6u^{93} + \dots + 9495938u - 2259497)$
c_7	$(u^2 - 3u + 3)^2(u^{16} + 8u^{15} + \dots - 3u^2 + 1)$ $(u^{30} - 19u^{29} + \dots - 288u + 32)$ $(3 + 18u + 34u^2 + 5u^3 - 114u^4 - 558u^5 - 1329u^6 + 147u^7 + 6235u^8 + 6490u^9 - 1.39 \times 10^4 u^{10} - 1.39 \times 10^4 u^{11} - 1.39 \times 10^4 u^{12} - 1.39 \times 10^4 u^{13} - 1.39 \times 10^4 u^{14} - 1.39 \times 10^4 u^{15} - 1.39 \times 10^4 u^{16} - 1.39 \times 10^4 u^{17} - 1.39 \times 10^4 u^{18} - 1.39 \times 10^4 u^{19} - 1.39 \times 10^4 u^{20} - 1.39 \times 10^4 u^{21} - 1.39 \times 10^4 u^{22} - 1.39 \times 10^4 u^{23} - 1.39 \times 10^4 u^{24} - 1.39 \times 10^4 u^{25} - 1.39 \times 10^4 u^{26} - 1.39 \times 10^4 u^{27} - 1.39 \times 10^4 u^{28} - 1.39 \times 10^4 u^{29} - 1.39 \times 10^4 u^{30})$
c_8	$(3u^4 - 3u^3 + \dots + 2u + 7)(u^{16} + u^{15} + \dots + 2u - 1)$ $(u^{30} - u^{29} + \dots + 46u + 27)$ $(3u^{94} + 6u^{93} + \dots + 9495938u - 2259497)$
c_9	$(3u^4 + 4u^2 + 3u + 3)(u^{16} + u^{15} + \dots + u^2 - 1)(u^{30} - u^{29} + \dots - 2u + 1)$ $(3u^{94} + 3u^{93} + \dots - 93u - 3)$
c_{11}	$(3u^4 + 4u^2 + 3u + 3)(u^{16} - u^{14} + \dots + 3u - 1)(u^{30} + 8u^{28} + \dots + 3u + 1)$ $(3u^{94} + 15u^{93} + \dots - 14505u - 1083)$

VI. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1	$(y-1)^4(y^{16} - 13y^{15} + \dots - 27y + 81)$ $(y^{30} - 2y^{29} + \dots + 12976128y + 1048576)$ $(-729 - 1.19 \times 10^4 y - 1.20 \times 10^5 y^2 - 8.69 \times 10^5 y^3 - 4.95 \times 10^6 y^4 - 2.31 \times 10^7 y^5 - 9.13 \times 10^7 y^6 - 2.71 \times 10^8 y^7 - 6.43 \times 10^8 y^8 - 1.19 \times 10^9 y^9 - 1.81 \times 10^9 y^{10} - 2.31 \times 10^9 y^{11} - 2.71 \times 10^9 y^{12} - 3.11 \times 10^9 y^{13} - 3.51 \times 10^9 y^{14} - 3.91 \times 10^9 y^{15} - 4.31 \times 10^9 y^{16} - 4.71 \times 10^9 y^{17} - 5.11 \times 10^9 y^{18} - 5.51 \times 10^9 y^{19} - 5.91 \times 10^9 y^{20} - 6.31 \times 10^9 y^{21} - 6.71 \times 10^9 y^{22} - 7.11 \times 10^9 y^{23} - 7.51 \times 10^9 y^{24} - 7.91 \times 10^9 y^{25} - 8.31 \times 10^9 y^{26} - 8.71 \times 10^9 y^{27} - 9.11 \times 10^9 y^{28} - 9.51 \times 10^9 y^{29} - 9.91 \times 10^9 y^{30})$
c_2	$(y^2 - 3y + 9)^2(y^{16} - 10y^{15} + \dots - 15y + 1)$ $(y^{30} - 11y^{29} + \dots + 11665408y + 262144)$ $(-9 + 138y - 1189y^2 + 9492y^3 - 8.10 \times 10^4 y^4 + 6.13 \times 10^5 y^5 - 3.69 \times 10^6 y^6 + 1.75 \times 10^7 y^7 - 7.43 \times 10^7 y^8 - 2.71 \times 10^8 y^9 - 8.13 \times 10^8 y^{10} - 2.11 \times 10^9 y^{11} - 5.11 \times 10^9 y^{12} - 1.11 \times 10^{10} y^{13} - 2.31 \times 10^{10} y^{14} - 4.71 \times 10^{10} y^{15} - 9.11 \times 10^{10} y^{16} - 1.71 \times 10^{11} y^{17} - 3.11 \times 10^{11} y^{18} - 5.11 \times 10^{11} y^{19} - 7.51 \times 10^{11} y^{20} - 1.11 \times 10^{12} y^{21} - 1.71 \times 10^{12} y^{22} - 2.51 \times 10^{12} y^{23} - 3.51 \times 10^{12} y^{24} - 4.71 \times 10^{12} y^{25} - 6.11 \times 10^{12} y^{26} - 7.71 \times 10^{12} y^{27} - 9.51 \times 10^{12} y^{28} - 1.15 \times 10^{13} y^{29} - 1.35 \times 10^{13} y^{30})$
c_3, c_{10}	$(9y^4 + 33y^3 + \dots - 11y + 1)(y^{16} + 2y^{14} + \dots - 26y + 1)$ $(y^{30} - 2y^{29} + \dots - 10y + 1)(9y^{94} - 156y^{93} + \dots - 451y + 1)$
c_4	$(9y^4 + 24y^3 + \dots + 15y + 9)(y^{16} - 2y^{15} + \dots + 13y + 1)$ $(y^{30} + 16y^{29} + \dots + 33y + 1)$ $(9y^{94} - 165y^{93} + \dots + 14483427y + 1172889)$
c_5	$(9y^4 + 24y^3 + \dots + 15y + 9)(y^{16} - 3y^{15} + \dots - 2y + 1)$ $(y^{30} + 3y^{29} + \dots + 6y + 1)(9y^{94} + 195y^{93} + \dots - 885y + 9)$
c_6	$(9y^4 - 21y^3 + \dots - 32y + 49)(y^{16} - 7y^{15} + \dots + 8y^2 + 1)$ $(y^{30} - 13y^{29} + \dots - 5896y + 729)$ $(9y^{94} - 318y^{93} + \dots - 181297638508792y + 5105326693009)$
c_7	$(y^2 - 3y + 9)^2(y^{16} + 2y^{15} + \dots - 6y + 1)$ $(y^{30} + y^{29} + \dots + 11776y + 1024)$ $(-9 + 120y - 292y^2 - 4337y^3 + 3.97 \times 10^4 y^4 - 9.74 \times 10^4 y^5 - 6.43 \times 10^5 y^6 + 7.65 \times 10^6 y^7 - 9.13 \times 10^7 y^8 - 1.19 \times 10^8 y^9 - 1.59 \times 10^8 y^{10} - 2.09 \times 10^8 y^{11} - 2.59 \times 10^8 y^{12} - 3.09 \times 10^8 y^{13} - 3.59 \times 10^8 y^{14} - 4.09 \times 10^8 y^{15} - 4.59 \times 10^8 y^{16} - 5.09 \times 10^8 y^{17} - 5.59 \times 10^8 y^{18} - 6.09 \times 10^8 y^{19} - 6.59 \times 10^8 y^{20} - 7.09 \times 10^8 y^{21} - 7.59 \times 10^8 y^{22} - 8.09 \times 10^8 y^{23} - 8.59 \times 10^8 y^{24} - 9.09 \times 10^8 y^{25} - 9.59 \times 10^8 y^{26} - 1.009 \times 10^9 y^{27} - 1.059 \times 10^9 y^{28} - 1.109 \times 10^9 y^{29} - 1.159 \times 10^9 y^{30})$
c_8	$(9y^4 - 21y^3 + \dots - 32y + 49)(y^{16} - 7y^{15} + \dots + 8y^2 + 1)$ $(y^{30} - 13y^{29} + \dots - 5896y + 729)$ $(9y^{94} - 318y^{93} + \dots - 181297638508792y + 5105326693009)$
c_9	$(9y^4 + 24y^3 + \dots + 15y + 9)(y^{16} - 3y^{15} + \dots - 2y + 1)$ $(y^{30} + 3y^{29} + \dots + 6y + 1)(9y^{94} + 195y^{93} + \dots - 885y + 9)$
c_{11}	$(9y^4 + 24y^3 + \dots + 15y + 9)(y^{16} - 2y^{15} + \dots + 13y + 1)$ $(y^{30} + 16y^{29} + \dots + 33y + 1)$ $(18y^{94} - 330y^{93} + \dots + 28966854y + 2345778)$