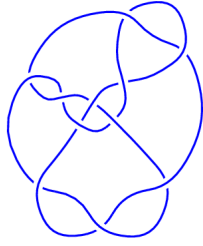
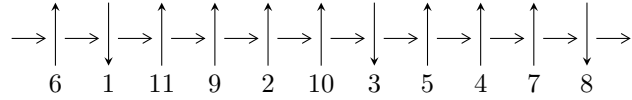


11a₁₂₂ (K11a₁₂₂)

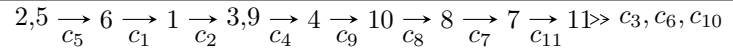


1

Arc Sequences



Solving Sequence



Representation Ideals

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

$$\begin{aligned} I_1^u &= \langle u^{14} - u^{13} + 4u^{12} - 3u^{11} + 9u^{10} - 6u^9 + 14u^8 - 7u^7 + 16u^6 - 6u^5 + 12u^4 - 3u^3 + 5u^2 - u + 1, \\ &\quad - u^{13} - u^{12} - u^{11} - 4u^{10} - 2u^9 - 8u^8 - u^7 - 12u^6 - 3u^5 - 12u^4 - u^3 - 6u^2 + b - 2u - 1, \\ &\quad - 2u^{13} + 2u^{12} - 6u^{11} + 5u^{10} - 12u^9 + 10u^8 - 16u^7 + 11u^6 - 16u^5 + 11u^4 - 7u^3 + 7u^2 + a - u + 3 \rangle \\ I_2^u &= \langle u^{77} + 17u^{75} + \dots + 27u + 19, \\ &\quad - 6.44936 \times 10^{99}u^{76} - 1.11816 \times 10^{100}u^{75} + \dots + 6.73504 \times 10^{100}a + 1.41953 \times 10^{101}, \\ &\quad - 1.13256 \times 10^{100}u^{76} - 1.46300 \times 10^{101}u^{75} + \dots + 6.73504 \times 10^{100}b - 3.26578 \times 10^{102} \rangle \end{aligned}$$

There are 2 irreducible components with 91 representations.

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

$$I_1^u = \langle u^{14} - u^{13} + \dots - u + 1, -u^{13} - u^{12} + \dots + b - 1, -2u^{13} + 2u^{12} + \dots + a + 3 \rangle$$

I.

(i) Arc colorings

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

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

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

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

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

$$a_9 = \begin{pmatrix} 2u^{13} - 2u^{12} + \dots + u - 3 \\ u^{13} + u^{12} + \dots + 2u + 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -2u^{13} + 2u^{12} + \dots - 6u + 2 \\ 2u^{13} + 6u^{11} + \dots + 2u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -2u^{13} + 3u^{12} + \dots - 2u + 3 \\ -3u^{13} + 3u^{12} + \dots + 4u^2 - 4u \end{pmatrix}$$

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

$$a_7 = \begin{pmatrix} 2u^{13} - 2u^{12} + \dots + 2u - 3 \\ u^{12} - 2u^{11} + \dots + 5u^2 + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^{13} + 4u^{11} + 9u^9 + 14u^7 + u^6 + 17u^5 + 3u^4 + 14u^3 + 3u^2 + 5u \\ -3u^{13} + 2u^{12} + \dots - 3u + 1 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} u^{13} + 4u^{11} + 9u^9 + 14u^7 + u^6 + 17u^5 + 3u^4 + 14u^3 + 3u^2 + 5u \\ -3u^{13} + 2u^{12} + \dots - 3u + 1 \end{pmatrix}$$

(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
$u = -0.760930 - 0.850713I$		
$a = 0.288224 + 0.376111I$	$3.68757 + 2.89359I$	$10.43723 - 2.39081I$
$b = 0.895335 - 0.144946I$		
$u = -0.760930 + 0.850713I$		
$a = 0.288224 - 0.376111I$	$3.68757 - 2.89359I$	$10.43723 + 2.39081I$
$b = 0.895335 + 0.144946I$		
$u = -0.410511 - 1.042372I$		
$a = -0.061574 - 0.588516I$	$-0.04552 + 3.64299I$	$9.10899 - 6.17803I$
$b = 0.671142 - 0.422586I$		
$u = -0.410511 + 1.042372I$		
$a = -0.061574 + 0.588516I$	$-0.04552 - 3.64299I$	$9.10899 + 6.17803I$
$b = 0.671142 + 0.422586I$		
$u = -0.312796 - 0.732458I$		
$a = -0.841086 + 0.312693I$	$1.193900 - 0.561188I$	$7.81743 - 1.40333I$
$b = -1.43333 - 1.08340I$		
$u = -0.312796 + 0.732458I$		
$a = -0.841086 - 0.312693I$	$1.193900 + 0.561188I$	$7.81743 + 1.40333I$
$b = -1.43333 + 1.08340I$		
$u = 0.263802 - 0.940835I$		
$a = 1.64850 - 0.51008I$	$-8.10462 - 1.08865I$	$-3.05079 - 1.27103I$
$b = 2.46088 - 0.52039I$		
$u = 0.263802 + 0.940835I$		
$a = 1.64850 + 0.51008I$	$-8.10462 + 1.08865I$	$-3.05079 + 1.27103I$
$b = 2.46088 + 0.52039I$		
$u = 0.281944 - 0.557057I$		
$a = -1.67014 + 1.19413I$	$-1.60779 + 3.00668I$	$2.45066 - 4.48374I$
$b = 0.106870 - 1.344883I$		
$u = 0.281944 + 0.557057I$		
$a = -1.67014 - 1.19413I$	$-1.60779 - 3.00668I$	$2.45066 + 4.48374I$
$b = 0.106870 + 1.344883I$		

Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.495691 - 1.193761I$ $a = -1.060413 + 0.273279I$ $b = -3.41543 + 0.22947I$	$-4.20321 - 6.46120I$	$0.62933 + 6.25768I$
$u = 0.495691 + 1.193761I$ $a = -1.060413 - 0.273279I$ $b = -3.41543 - 0.22947I$	$-4.20321 + 6.46120I$	$0.62933 - 6.25768I$
$u = 0.942798 - 0.813476I$ $a = 0.696494 - 0.751254I$ $b = 0.714533 + 0.209796I$	$0.85500 - 3.43645I$	$1.10715 + 2.59332I$
$u = 0.942798 + 0.813476I$ $a = 0.696494 + 0.751254I$ $b = 0.714533 - 0.209796I$	$0.85500 + 3.43645I$	$1.10715 - 2.59332I$

$$\text{II. } I_2^u = \langle u^{77} + 17u^{75} + \dots + 27u + 19, -6.45 \times 10^{99}u^{76} - 1.12 \times 10^{100}u^{75} + \dots + 6.74 \times 10^{100}a + 1.42 \times 10^{101}, -1.13 \times 10^{100}u^{76} - 1.46 \times 10^{101}u^{75} + \dots + 6.74 \times 10^{100}b - 3.27 \times 10^{102} \rangle$$

(i) Arc colorings

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

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

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

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

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

$$a_9 = \begin{pmatrix} 0.0957583u^{76} + 0.166022u^{75} + \dots + 3.61591u - 2.10768 \\ 0.168159u^{76} + 2.17222u^{75} + \dots + 31.1844u + 48.4894 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 0.107940u^{76} - 0.319682u^{75} + \dots - 4.86488u - 1.31373 \\ 1.87506u^{76} - 0.894520u^{75} + \dots + 47.5092u + 6.82387 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.0247315u^{76} + 0.402179u^{75} + \dots + 9.18904u + 9.30887 \\ -0.811198u^{76} - 0.354368u^{75} + \dots - 26.0022u - 16.0920 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.0957583u^{76} + 0.166022u^{75} + \dots + 3.61591u - 2.10768 \\ -0.224474u^{76} + 2.21639u^{75} + \dots + 24.8824u + 45.3350 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 0.395882u^{76} + 0.417577u^{75} + \dots + 19.6457u + 10.6799 \\ 0.717479u^{76} + 2.08504u^{75} + \dots + 50.4616u + 57.0272 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.824407u^{76} + 0.312532u^{75} + \dots - 20.0376u + 1.26720 \\ -1.34012u^{76} - 0.315900u^{75} + \dots - 41.0010u - 28.8806 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.824407u^{76} + 0.312532u^{75} + \dots - 20.0376u + 1.26720 \\ -1.34012u^{76} - 0.315900u^{75} + \dots - 41.0010u - 28.8806 \end{pmatrix}$$

(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
$u = -0.989911 - 0.422296I$ $a = -0.251720 - 1.364753I$ $b = -0.091498 + 0.769457I$	$-0.76965 - 10.43427I$	$5.30103 + 5.75075I$
$u = -0.989911 + 0.422296I$ $a = -0.251720 + 1.364753I$ $b = -0.091498 - 0.769457I$	$-0.76965 + 10.43427I$	$5.30103 - 5.75075I$
$u = -0.934821 - 0.515588I$ $a = 0.383304 - 0.328154I$ $b = -0.0312189 + 0.1157300I$	$4.74218 + 1.96042I$	$16.2336 - 2.2915I$
$u = -0.934821 + 0.515588I$ $a = 0.383304 + 0.328154I$ $b = -0.0312189 - 0.1157300I$	$4.74218 - 1.96042I$	$16.2336 + 2.2915I$
$u = -0.830555 - 0.488900I$ $a = 0.59409 + 1.35228I$ $b = -0.205189 - 0.491589I$	$-4.74914 - 4.01083I$	$2.17422 + 3.64442I$
$u = -0.830555 + 0.488900I$ $a = 0.59409 - 1.35228I$ $b = -0.205189 + 0.491589I$	$-4.74914 + 4.01083I$	$2.17422 - 3.64442I$
$u = -0.799696 - 0.881266I$ $a = -0.778864 - 0.677625I$ $b = -0.608768 - 0.733284I$	$1.67283 + 2.99269I$	$10.04742 - 1.08404I$
$u = -0.799696 + 0.881266I$ $a = -0.778864 + 0.677625I$ $b = -0.608768 + 0.733284I$	$1.67283 - 2.99269I$	$10.04742 + 1.08404I$
$u = -0.734204 - 1.069317I$ $a = -0.471434 + 0.107781I$ $b = -0.880894 + 0.188847I$	$3.10184 + 4.12640I$	$9.37478 - 8.60997I$
$u = -0.734204 + 1.069317I$ $a = -0.471434 - 0.107781I$ $b = -0.880894 - 0.188847I$	$3.10184 - 4.12640I$	$9.37478 + 8.60997I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.674571 - 1.175150I$ $a = -1.103245 - 0.329822I$ $b = -3.10515 - 0.43067I$	$-3.0941 + 16.4594I$	$3.02258 - 9.03728I$
$u = -0.674571 + 1.175150I$ $a = -1.103245 + 0.329822I$ $b = -3.10515 + 0.43067I$	$-3.0941 - 16.4594I$	$3.02258 + 9.03728I$
$u = -0.651187 - 1.101692I$ $a = 1.066710 + 0.419557I$ $b = 2.79919 + 1.05686I$	$-6.58950 + 9.55660I$	$0.66279 - 7.75342I$
$u = -0.651187 + 1.101692I$ $a = 1.066710 - 0.419557I$ $b = 2.79919 - 1.05686I$	$-6.58950 - 9.55660I$	$0.66279 + 7.75342I$
$u = -0.629756 - 0.623375I$ $a = 1.307114 + 0.199737I$ $b = 1.45060 - 0.15800I$	$3.26953 - 0.81616I$	$8.32679 + 0.51400I$
$u = -0.629756 + 0.623375I$ $a = 1.307114 - 0.199737I$ $b = 1.45060 + 0.15800I$	$3.26953 + 0.81616I$	$8.32679 - 0.51400I$
$u = -0.582278 - 0.996325I$ $a = 0.256119 + 1.043490I$ $b = 0.550656 + 0.431763I$	$2.13289 + 5.59350I$	$5.06025 - 6.62590I$
$u = -0.582278 + 0.996325I$ $a = 0.256119 - 1.043490I$ $b = 0.550656 - 0.431763I$	$2.13289 - 5.59350I$	$5.06025 + 6.62590I$
$u = -0.509665 - 0.956039I$ $a = 1.253304 + 0.487059I$ $b = 3.78413 + 0.25792I$	$-1.80643 + 6.36048I$	$5.58001 - 6.42969I$
$u = -0.509665 + 0.956039I$ $a = 1.253304 - 0.487059I$ $b = 3.78413 - 0.25792I$	$-1.80643 - 6.36048I$	$5.58001 + 6.42969I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.478152 - 1.028478I$		
$a = 0.043115 - 0.583450I$	$-0.64979 + 3.08848I$	$2.22165 - 0.28761I$
$b = 0.397150 - 0.245113I$		
$u = -0.478152 + 1.028478I$		
$a = 0.043115 + 0.583450I$	$-0.64979 - 3.08848I$	$2.22165 + 0.28761I$
$b = 0.397150 + 0.245113I$		
$u = -0.474736 - 0.723995I$		
$a = 1.14989 + 1.10874I$	$-1.02736 - 2.28684I$	$7.55737 - 1.92002I$
$b = 0.570427 - 1.165347I$		
$u = -0.474736 + 0.723995I$		
$a = 1.14989 - 1.10874I$	$-1.02736 + 2.28684I$	$7.55737 + 1.92002I$
$b = 0.570427 + 1.165347I$		
$u = -0.463474 - 0.499512I$		
$a = -0.801287 + 0.041281I$	$0.906262 + 0.882340I$	$7.93772 - 5.58390I$
$b = -0.532069 - 0.441291I$		
$u = -0.463474 + 0.499512I$		
$a = -0.801287 - 0.041281I$	$0.906262 - 0.882340I$	$7.93772 + 5.58390I$
$b = -0.532069 + 0.441291I$		
$u = -0.435143 - 1.013862I$		
$a = 0.293000 - 0.724385I$	$-0.79562 + 3.15505I$	$-0.63093 - 4.13162I$
$b = 0.782749 - 0.438255I$		
$u = -0.435143 + 1.013862I$		
$a = 0.293000 + 0.724385I$	$-0.79562 - 3.15505I$	$-0.63093 + 4.13162I$
$b = 0.782749 + 0.438255I$		
$u = -0.429893 - 0.940961I$		
$a = -1.160766 - 0.505438I$	$-2.33844 - 1.16139I$	$2.70535 + 0.40617I$
$b = -3.34226 - 1.64978I$		
$u = -0.429893 + 0.940961I$		
$a = -1.160766 + 0.505438I$	$-2.33844 + 1.16139I$	$2.70535 - 0.40617I$
$b = -3.34226 + 1.64978I$		

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.409048$ $a = -1.74031$ $b = -0.471572$	1.45831	6.75650
$u = -0.303925 - 0.883906I$ $a = -0.690967 + 0.747435I$ $b = -1.138355 - 0.291442I$	$0.163595 - 0.350353I$	$0.074950 + 0.248497I$
$u = -0.303925 + 0.883906I$ $a = -0.690967 - 0.747435I$ $b = -1.138355 + 0.291442I$	$0.163595 + 0.350353I$	$0.074950 - 0.248497I$
$u = -0.286414 - 0.770897I$ $a = -1.290016 - 0.308655I$ $b = 0.414274 + 0.310296I$	$-1.66948 + 4.41582I$	$1.89095 - 7.51021I$
$u = -0.286414 + 0.770897I$ $a = -1.290016 + 0.308655I$ $b = 0.414274 - 0.310296I$	$-1.66948 - 4.41582I$	$1.89095 + 7.51021I$
$u = -0.095485 - 1.136581I$ $a = -0.467742 + 0.322157I$ $b = -0.265290 + 0.597182I$	$-1.23115 + 4.61547I$	$2.04050 - 7.90695I$
$u = -0.095485 + 1.136581I$ $a = -0.467742 - 0.322157I$ $b = -0.265290 - 0.597182I$	$-1.23115 - 4.61547I$	$2.04050 + 7.90695I$
$u = -0.076124 - 1.176171I$ $a = -1.295548 - 0.158477I$ $b = -3.08814 + 0.35616I$	$-10.45232 - 1.94264I$	$-4.20127 + 1.22224I$
$u = -0.076124 + 1.176171I$ $a = -1.295548 + 0.158477I$ $b = -3.08814 - 0.35616I$	$-10.45232 + 1.94264I$	$-4.20127 - 1.22224I$
$u = -0.040521 - 1.392890I$ $a = 1.047790 + 0.163637I$ $b = 3.16321 + 0.10212I$	$-7.50502 - 7.02191I$	$-0.31136 + 6.13150I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.040521 + 1.392890I$ $a = 1.047790 - 0.163637I$ $b = 3.16321 - 0.10212I$	$-7.50502 + 7.02191I$	$-0.31136 - 6.13150I$
$u = 0.071474 - 0.574838I$ $a = -0.658914 + 0.037091I$ $b = 0.31895 - 1.41760I$	$0.98061 + 1.39590I$	$4.58324 - 5.64184I$
$u = 0.071474 + 0.574838I$ $a = -0.658914 - 0.037091I$ $b = 0.31895 + 1.41760I$	$0.98061 - 1.39590I$	$4.58324 + 5.64184I$
$u = 0.179722 - 0.986918I$ $a = 0.589442 - 0.481399I$ $b = 0.927560 - 0.042754I$	$-3.15064 + 0.31796I$	$-2.33639 - 1.41335I$
$u = 0.179722 + 0.986918I$ $a = 0.589442 + 0.481399I$ $b = 0.927560 + 0.042754I$	$-3.15064 - 0.31796I$	$-2.33639 + 1.41335I$
$u = 0.331830 - 1.139994I$ $a = 1.146845 - 0.533161I$ $b = 2.55365 - 0.26632I$	$-6.59087 + 0.43258I$	$0.707343 - 0.881713I$
$u = 0.331830 + 1.139994I$ $a = 1.146845 + 0.533161I$ $b = 2.55365 + 0.26632I$	$-6.59087 - 0.43258I$	$0.707343 + 0.881713I$
$u = 0.399420 - 0.898642I$ $a = -1.60235 + 0.79682I$ $b = -2.50057 + 0.03998I$	$-7.58964 - 1.63836I$	$5.03748 + 6.00787I$
$u = 0.399420 + 0.898642I$ $a = -1.60235 - 0.79682I$ $b = -2.50057 - 0.03998I$	$-7.58964 + 1.63836I$	$5.03748 - 6.00787I$
$u = 0.503300 - 1.113016I$ $a = -1.214161 + 0.162466I$ $b = -2.93558 + 0.64198I$	$-5.46055 - 8.15782I$	$0.15754 + 9.04105I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.503300 + 1.113016I$ $a = -1.214161 - 0.162466I$ $b = -2.93558 - 0.64198I$	$-5.46055 + 8.15782I$	$0.15754 - 9.04105I$
$u = 0.534948 - 1.254539I$ $a = -0.879397 + 0.342992I$ $b = -3.14776 + 0.50318I$	$-3.56674 - 4.58685I$	$3.10472 + 3.50659I$
$u = 0.534948 + 1.254539I$ $a = -0.879397 - 0.342992I$ $b = -3.14776 - 0.50318I$	$-3.56674 + 4.58685I$	$3.10472 - 3.50659I$
$u = 0.545977 - 1.014859I$ $a = 1.249176 - 0.421331I$ $b = 2.32050 - 0.84755I$	$-6.23573 - 3.59828I$	$0.49382 + 2.10430I$
$u = 0.545977 + 1.014859I$ $a = 1.249176 + 0.421331I$ $b = 2.32050 + 0.84755I$	$-6.23573 + 3.59828I$	$0.49382 - 2.10430I$
$u = 0.574941 - 1.029821I$ $a = -0.520545 - 0.293897I$ $b = -1.35943 + 0.40986I$	$-0.73372 - 6.46640I$	$3.77130 + 8.79200I$
$u = 0.574941 + 1.029821I$ $a = -0.520545 + 0.293897I$ $b = -1.35943 - 0.40986I$	$-0.73372 + 6.46640I$	$3.77130 - 8.79200I$
$u = 0.588221 - 0.492828I$ $a = 0.143053 + 0.668138I$ $b = 0.702743 - 0.369100I$	$0.78679 + 1.78171I$	$6.93161 - 4.77332I$
$u = 0.588221 + 0.492828I$ $a = 0.143053 - 0.668138I$ $b = 0.702743 + 0.369100I$	$0.78679 - 1.78171I$	$6.93161 + 4.77332I$
$u = 0.630106 - 0.842299I$ $a = 0.180829 + 0.603517I$ $b = -0.031738 - 0.592020I$	$3.97239 - 0.95647I$	$12.03452 - 0.45868I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.630106 + 0.842299I$ $a = 0.180829 - 0.603517I$ $b = -0.031738 + 0.592020I$	$3.97239 + 0.95647I$	$12.03452 + 0.45868I$
$u = 0.654044 - 1.088477I$ $a = 0.690007 + 0.459548I$ $b = 1.314589 + 0.381589I$	$3.22901 - 11.73082I$	$6.38438 + 8.97159I$
$u = 0.654044 + 1.088477I$ $a = 0.690007 - 0.459548I$ $b = 1.314589 - 0.381589I$	$3.22901 + 11.73082I$	$6.38438 - 8.97159I$
$u = 0.655837 - 0.159805I$ $a = -0.00986 + 2.06028I$ $b = 0.325524 - 0.205750I$	$-2.86462 + 3.78073I$	$3.56597 - 3.81882I$
$u = 0.655837 + 0.159805I$ $a = -0.00986 - 2.06028I$ $b = 0.325524 + 0.205750I$	$-2.86462 - 3.78073I$	$3.56597 + 3.81882I$
$u = 0.659420 - 0.849922I$ $a = -0.479481 - 0.136371I$ $b = -1.50030 - 0.50372I$	$3.96385 - 4.06799I$	$11.6694 + 8.4262I$
$u = 0.659420 + 0.849922I$ $a = -0.479481 + 0.136371I$ $b = -1.50030 + 0.50372I$	$3.96385 + 4.06799I$	$11.6694 - 8.4262I$
$u = 0.65986 - 1.27360I$ $a = 0.965792 - 0.358318I$ $b = 3.16751 + 0.14273I$	$-3.02971 - 6.56618I$	$8.06159 + 6.45899I$
$u = 0.65986 + 1.27360I$ $a = 0.965792 + 0.358318I$ $b = 3.16751 - 0.14273I$	$-3.02971 + 6.56618I$	$8.06159 - 6.45899I$
$u = 0.670483 - 0.483183I$ $a = 0.89992 - 1.43778I$ $b = 0.316262 - 0.174768I$	$-4.69637 - 1.06019I$	$1.77167 + 3.37054I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.670483 + 0.483183I$ $a = 0.89992 + 1.43778I$ $b = 0.316262 + 0.174768I$	$-4.69637 + 1.06019I$	$1.77167 - 3.37054I$
$u = 0.843840 - 0.510397I$ $a = -0.572738 - 0.746254I$ $b = -0.354916 - 0.091442I$	$4.98057 + 6.15682I$	$9.42431 - 4.70027I$
$u = 0.843840 + 0.510397I$ $a = -0.572738 + 0.746254I$ $b = -0.354916 + 0.091442I$	$4.98057 - 6.15682I$	$9.42431 + 4.70027I$
$u = 0.992506 - 0.102823I$ $a = -0.028385 - 1.312384I$ $b = 0.252263 + 1.130851I$	$0.401797 + 0.602420I$	$8.89301 + 1.04877I$
$u = 0.992506 + 0.102823I$ $a = -0.028385 + 1.312384I$ $b = 0.252263 - 1.130851I$	$0.401797 - 0.602420I$	$8.89301 - 1.04877I$
$u = 1.12911 - 0.85261I$ $a = -0.585611 + 0.686930I$ $b = -1.25701 - 0.71873I$	$1.39277 - 3.88492I$	$11.7978 + 8.6829I$
$u = 1.12911 + 0.85261I$ $a = -0.585611 - 0.686930I$ $b = -1.25701 + 0.71873I$	$1.39277 + 3.88492I$	$11.7978 - 8.6829I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{14} - u^{13} + \dots - u + 1)(u^{77} + 17u^{75} + \dots + 27u - 19)$
c_2	$(u^{14} + 7u^{13} + \dots + 9u + 1)(u^{77} + 34u^{76} + \dots - 5009u - 361)$
c_3	$(u^{14} + 2u^{11} - 2u^{10} + 2u^8 - 6u^7 + 4u^6 + 2u^5 - 4u^4 + 2u^3 + u^2 - 2u + 1)$ $(u^{77} + 7u^{76} + \dots + 18u + 1)$
c_4	$(u^{14} + 8u^{12} + \dots + 4u^2 + 1)(u^{77} + u^{76} + \dots + 6u + 19)$
c_5	$(u^{14} + u^{13} + \dots + u + 1)(u^{77} + 17u^{75} + \dots + 27u - 19)$
c_6	$(u^{14} - 2u^{13} + \dots - 2u + 1)(u^{77} + u^{76} + \dots + 420u - 25)$
c_7	$(u^{14} + 3u^{12} + \dots + 4u^2 + 1)(u^{77} + u^{76} + \dots + 138u + 323)$
c_8, c_9	$(u^{14} + 8u^{12} + \dots + 4u^2 + 1)(u^{77} + u^{76} + \dots + 6u + 19)$
c_{10}	$(u^{14} + 2u^{13} + \dots + 2u + 1)(u^{77} + u^{76} + \dots + 420u - 25)$
c_{11}	$(u^{14} + u^{12} - 3u^{11} - 2u^{10} - 2u^9 + u^8 + 3u^7 + 5u^6 + u^5 + u^4 - 2u^3 + 1)$ $(u^{77} + 5u^{76} + \dots - 282u - 31)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y^{14} + 7y^{13} + \dots + 9y + 1)(y^{77} + 34y^{76} + \dots - 5009y - 361)$
c_2	$(y^{14} + 7y^{13} + \dots + 5y + 1)(y^{77} + 26y^{76} + \dots + 3771587y - 130321)$
c_3	$(y^{14} - 4y^{12} + \dots - 2y + 1)(y^{77} - y^{76} + \dots - 142y - 1)$
c_4, c_8, c_9	$(y^{14} + 16y^{13} + \dots + 8y + 1)(y^{77} + 75y^{76} + \dots - 3156y - 361)$
c_6	$(y^{14} - 12y^{13} + \dots - 14y + 1)(y^{77} - 49y^{76} + \dots + 40050y - 625)$
c_7	$(y^{14} + 6y^{13} + \dots + 8y + 1)(y^{77} + 21y^{76} + \dots - 3986156y - 104329)$
c_{10}	$(y^{14} - 12y^{13} + \dots - 14y + 1)(y^{77} - 49y^{76} + \dots + 40050y - 625)$
c_{11}	$(y^{14} + 2y^{13} + \dots + 2y^2 + 1)(y^{77} - 3y^{76} + \dots + 22112y - 961)$