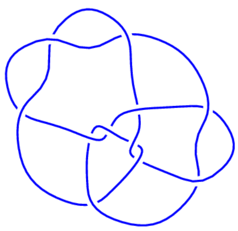
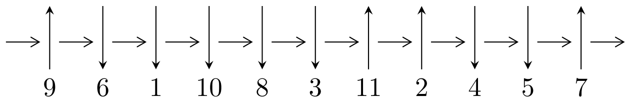
$11a_{346}$ ($K11a_{346}$)



[1]

Arc Sequences



Solving Sequence

$$2{,}6 \xrightarrow[c_2]{} 3 \xrightarrow[c_6]{} 7{,}9 \xrightarrow[c_1]{} 1 \xrightarrow[c_3]{} 4 \xrightarrow[c_8]{} 8 \xrightarrow[c_5]{} 5 \xrightarrow[c_{11}]{} 11 \xrightarrow[c_{10}]{} 10 \gg c_4, c_7, c_9$$

Representation Ideals

$$I = \bigcap_{i=1}^{5} I_i^u$$

$$I_1^u = \langle u - 1,\ b - 1,\ 2a - 1 \rangle$$
$$I_2^u = \langle 4a^2 + 4a - 1,\ b + 1,\ u + 1 \rangle$$
$$I_3^u = \langle 9a^4 + 18a^3 + 18a^2 + 12a + 4,\ 9a^3 + 9a^2 + 6a + 2u + 2,\ -9a^3 - 12a^2 + 2b - 12a - 6 \rangle$$
$$I_4^u = \langle b^{30} - 3b^{29} + \cdots + 8b + 13,\ 7.08789 \times 10^{22}u - 3.40058 \times 10^{23}b^{29} + \cdots + 2.41364 \times 10^{25}b - 1.16881 \times 10^{25},$$
$$- 4.17087 \times 10^{23}b^{29} + 1.42208 \times 10^{24}b^{28} + \cdots + 7.08789 \times 10^{22}a - 1.48240 \times 10^{25} \rangle$$
$$I_5^u = \langle u^{23} + 2u^{22} + \cdots + 71u + 8,$$
$$- 7.95000 \times 10^{18}u^{22} - 1.97992 \times 10^{20}u^{21} + \cdots + 1.71401 \times 10^{22}b + 1.09059 \times 10^{22},$$
$$2.75649 \times 10^{21}u^{22} + 5.13543 \times 10^{21}u^{21} + \cdots + 3.42803 \times 10^{22}a + 2.42288 \times 10^{23} \rangle$$

There are 5 irreducible components with 60 representations.

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

I. $I_1^u = \langle u-1,\ b-1,\ 2a-1\rangle$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} \frac{3}{2} \\ 1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{1}{4} \\ \frac{1}{2} \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{1}{2} \\ 1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{1}{4} \\ \frac{1}{2} \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{1}{2} \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

	Solution to I_1^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	1.00000		
$a =$	0.500000	0	4.50000
$b =$	1.00000		

II. $I_2^u = \langle 4a^2 + 4a - 1,\ b + 1,\ u + 1 \rangle$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} a \\ -1 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -a + 1 \\ 1 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 2a + \frac{3}{4} \\ a + 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} a + 1 \\ -1 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} -a - \frac{5}{4} \\ a \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -a \\ 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{2}a + \frac{7}{4} \\ a + \frac{1}{2} \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} \frac{1}{2}a + \frac{7}{4} \\ a + \frac{1}{2} \end{pmatrix}$$

(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
$u = -1.00000$ $a = -1.20711$ $b = -1.00000$	-4.93480	-8.00000
$u = -1.00000$ $a = \quad 0.207107$ $b = -1.00000$	-4.93480	-8.00000

III. $\boldsymbol{I^u_3 =}$
$\boldsymbol{\langle 9a^4+18a^3+18a^2+12a+4,\ 9a^3+9a^2+6a+2u+2,\ -9a^3-12a^2+2b-12a-6\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ -\frac{9}{2}a^3 - \frac{9}{2}a^2 - 3a - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -\frac{9}{2}a^3 - \frac{9}{2}a^2 - 3a - 2 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} \frac{9}{2}a^3 + \frac{9}{2}a^2 + 3a + 1 \\ -\frac{9}{2}a^3 - \frac{9}{2}a^2 - 3a \end{pmatrix}$$
$$a_9 = \begin{pmatrix} a \\ \frac{9}{2}a^3 + 6a^2 + 6a + 3 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -3a^3 - 3a^2 - 3a - 1 \\ -1 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} \frac{3}{2}a^3 + \frac{5}{2}a^2 + 2a + 2 \\ -\frac{15}{2}a^3 - 9a^2 - 6a - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -\frac{9}{2}a^3 - 6a^2 - 5a - 3 \\ \frac{9}{2}a^3 + 6a^2 + 6a + 3 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} \frac{9}{2}a^3 + \frac{13}{2}a^2 + 5a + 3 \\ -\frac{21}{2}a^3 - 12a^2 - 9a - 4 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} \frac{3}{2}a^3 + \frac{9}{2}a^2 + 3a + 2 \\ -9a^3 - \frac{27}{2}a^2 - 12a - 7 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{3}{2}a^2 + a + \frac{1}{3} \\ -\frac{3}{2}a^2 - a - 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} \frac{3}{2}a^2 + a + \frac{1}{3} \\ -\frac{3}{2}a^2 - a - 1 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =**unknown**

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.500000 + 0.866025I$ $a = -0.788675 - 0.211325I$ $b = -1.00000I$	$-3.28987 - 2.02988I$	$-10.00000 + 3.46410I$
$u = 0.500000 - 0.866025I$ $a = -0.788675 + 0.211325I$ $b = 1.00000I$	$-3.28987 + 2.02988I$	$-10.00000 - 3.46410I$
$u = 0.500000 - 0.866025I$ $a = -0.211325 - 0.788675I$ $b = -1.00000I$	$-3.28987 + 2.02988I$	$-10.00000 - 3.46410I$
$u = 0.500000 + 0.866025I$ $a = -0.211325 + 0.788675I$ $b = 1.00000I$	$-3.28987 - 2.02988I$	$-10.00000 + 3.46410I$

IV.

$\boldsymbol{I^u_4 = \langle b^{30}-3b^{29}+\cdots+8b+13,\ 7.09\times10^{22}u-3.40\times10^{23}b^{29}+\cdots+2.41\times10^{25}b-1.17\times10^{25},\ -4.17\times10^{23}b^{29}+1.42\times10^{24}b^{28}+\cdots+7.09\times10^{22}a-1.48\times10^{25}\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 0 \\ 4.79774b^{29} - 16.1279b^{28} + \cdots - 340.531b + 164.902 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 1 \\ -0.732079b^{29} + 2.42387b^{28} + \cdots + 52.3394b - 24.4729 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} -4.79774b^{29} + 16.1279b^{28} + \cdots + 340.531b - 164.902 \\ 7.04949b^{29} - 23.8397b^{28} + \cdots - 505.629b + 244.604 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} 5.88450b^{29} - 20.0636b^{28} + \cdots - 439.100b + 209.145 \\ b \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -2.41007b^{29} + 8.30531b^{28} + \cdots + 162.069b - 75.4985 \\ b^2 \end{pmatrix}$$
$$a_4 = \begin{pmatrix} -1.29396b^{29} + 4.23482b^{28} + \cdots + 128.276b - 67.1735 \\ -0.929569b^{29} + 3.24141b^{28} + \cdots + 57.2893b - 24.9558 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 5.88450b^{29} - 20.0636b^{28} + \cdots - 440.100b + 209.145 \\ b \end{pmatrix}$$
$$a_5 = \begin{pmatrix} -1.31203b^{29} + 4.54538b^{28} + \cdots + 119.147b - 60.7693 \\ 3.63651b^{29} - 12.1141b^{28} + \cdots - 250.537b + 123.837 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -2.72764b^{29} + 9.34791b^{28} + \cdots + 186.359b - 88.3501 \\ -1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.476015b^{29} - 1.67468b^{28} + \cdots - 5.11740b - 4.47311 \\ 1.04611b^{29} - 3.34677b^{28} + \cdots - 73.7020b + 39.2535 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} 0.476015b^{29} - 1.67468b^{28} + \cdots - 5.11740b - 4.47311 \\ 1.04611b^{29} - 3.34677b^{28} + \cdots - 73.7020b + 39.2535 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.314203 - 0.295245I$ $a = -0.136655 - 0.231531I$ $b = -0.991485 - 0.204855I$	$-5.47316 + 5.45324I$	$-7.99532 - 6.35130I$
$u = 1.314203 + 0.295245I$ $a = -0.136655 + 0.231531I$ $b = -0.991485 + 0.204855I$	$-5.47316 - 5.45324I$	$-7.99532 + 6.35130I$
$u = -1.378138 + 0.316043I$ $a = 0.41954 - 1.81333I$ $b = -0.55486 - 1.65691I$	$-12.8088 + 8.0168I$	$-11.04132 - 4.89679I$
$u = -1.378138 - 0.316043I$ $a = 0.41954 + 1.81333I$ $b = -0.55486 + 1.65691I$	$-12.8088 - 8.0168I$	$-11.04132 + 4.89679I$
$u = 1.30332$ $a = 0.44659 - 1.82285I$ $b = -0.455272 - 1.273506I$	-8.81535	-13.0394
$u = 1.30332$ $a = 0.44659 + 1.82285I$ $b = -0.455272 + 1.273506I$	-8.81535	-13.0394
$u = -0.074720 - 0.708028I$ $a = 0.412232 - 0.904577I$ $b = -0.373462 - 0.000206I$	$-1.11561 - 1.81248I$	$-2.14381 + 4.33913I$
$u = -0.074720 + 0.708028I$ $a = 0.412232 + 0.904577I$ $b = -0.373462 + 0.000206I$	$-1.11561 + 1.81248I$	$-2.14381 - 4.33913I$
$u = 0.200931 - 0.760138I$ $a = -0.0025046 + 0.0745229I$ $b = -0.298420 - 1.343442I$	$-7.81260 + 4.11725I$	$-6.59688 - 3.71929I$
$u = 0.200931 + 0.760138I$ $a = -0.0025046 - 0.0745229I$ $b = -0.298420 + 1.343442I$	$-7.81260 - 4.11725I$	$-6.59688 + 3.71929I$

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.339181$ $a=\ \ 3.50114+1.16755I$ $b=-0.150080-1.033234I$	-3.88780	-12.6282
$u=-0.339181$ $a=\ \ 3.50114-1.16755I$ $b=-0.150080+1.033234I$	-3.88780	-12.6282
$u=-1.224706+0.250895I$ $a=\ \ 0.81617-2.04457I$ $b=-0.116215-1.234426I$	$-4.58881+1.64925I$	$-5.60633-0.16522I$
$u=-1.224706-0.250895I$ $a=\ \ 0.81617+2.04457I$ $b=-0.116215+1.234426I$	$-4.58881-1.64925I$	$-5.60633+0.16522I$
$u=\ \ 0.897290+0.288232I$ $a=-3.17433-0.41297I$ $b=\ \ 0.085684-1.202646I$	$-10.05371+0.15908I$	$-9.79403+0.85194I$
$u=\ \ 0.897290-0.288232I$ $a=-3.17433+0.41297I$ $b=\ \ 0.085684+1.202646I$	$-10.05371-0.15908I$	$-9.79403-0.85194I$
$u=-0.074720-0.708028I$ $a=-0.009915-0.231974I$ $b=\ \ 0.186786-1.050899I$	$-1.11561-1.81248I$	$-2.14381+4.33913I$
$u=-0.074720+0.708028I$ $a=-0.009915+0.231974I$ $b=\ \ 0.186786+1.050899I$	$-1.11561+1.81248I$	$-2.14381-4.33913I$
$u=\ \ 0.897290-0.288232I$ $a=-0.32525+2.38302I$ $b=\ \ 0.312806-0.818632I$	$-10.05371-0.15908I$	$-9.79403-0.85194I$
$u=\ \ 0.897290+0.288232I$ $a=-0.32525-2.38302I$ $b=\ \ 0.312806+0.818632I$	$-10.05371+0.15908I$	$-9.79403+0.85194I$

Solution to I_4^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.314203 + 0.295245I$ $a = -0.51084 - 1.84381I$ $b = 0.37957 - 1.41365I$	$-5.47316 - 5.45324I$	$-7.99532 + 6.35130I$
$u = 1.314203 - 0.295245I$ $a = -0.51084 + 1.84381I$ $b = 0.37957 + 1.41365I$	$-5.47316 + 5.45324I$	$-7.99532 - 6.35130I$
$u = -1.224706 - 0.250895I$ $a = -0.448867 + 0.146986I$ $b = 0.497171 - 0.372159I$	$-4.58881 - 1.64925I$	$-5.60633 + 0.16522I$
$u = -1.224706 + 0.250895I$ $a = -0.448867 - 0.146986I$ $b = 0.497171 + 0.372159I$	$-4.58881 + 1.64925I$	$-5.60633 - 0.16522I$
$u = -1.43385$ $a = 0.05645 - 1.56167I$ $b = 0.75703 - 1.64902I$	-17.0919	-13.9771
$u = -1.43385$ $a = 0.05645 + 1.56167I$ $b = 0.75703 + 1.64902I$	-17.0919	-13.9771
$u = 0.200931 + 0.760138I$ $a = -0.910945 + 0.772405I$ $b = 0.839538 - 0.236157I$	$-7.81260 - 4.11725I$	$-6.59688 + 3.71929I$
$u = 0.200931 - 0.760138I$ $a = -0.910945 - 0.772405I$ $b = 0.839538 + 0.236157I$	$-7.81260 + 4.11725I$	$-6.59688 - 3.71929I$
$u = -1.378138 - 0.316043I$ $a = 0.367182 - 0.457274I$ $b = 1.381213 - 0.203773I$	$-12.8088 - 8.0168I$	$-11.04132 + 4.89679I$
$u = -1.378138 + 0.316043I$ $a = 0.367182 + 0.457274I$ $b = 1.381213 + 0.203773I$	$-12.8088 + 8.0168I$	$-11.04132 - 4.89679I$

V. $\boldsymbol{I^u_5 =}$
$\boldsymbol{\langle u^{23}+2u^{22}+\cdots+71u+8,\ -7.95\times10^{18}u^{22}-1.98\times10^{20}u^{21}+\cdots+1.71\times10^{22}b+1.09\times10^{22},\ 2.76\times10^{21}u^{22}+5.14\times10^{21}u^{21}+\cdots+3.43\times10^{22}a+2.42\times10^{23}\rangle}$

(i) Arc colorings

$$a_2 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_3 = \begin{pmatrix}1\\u^2\end{pmatrix}$$
$$a_7 = \begin{pmatrix}-u\\-u^3+u\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0804102u^{22}-0.149807u^{21}+\cdots+1.47745u-7.06786\\0.000463824u^{22}+0.0115513u^{21}+\cdots+2.33256u-0.636277\end{pmatrix}$$
$$a_1 = \begin{pmatrix}0.0791449u^{22}+0.154837u^{21}+\cdots-0.606289u+7.33252\\0.00348213u^{22}+0.00104742u^{21}+\cdots-1.07750u+0.674619\end{pmatrix}$$
$$a_4 = \begin{pmatrix}0.0705113u^{22}+0.140559u^{21}+\cdots-0.178315u+6.08243\\-0.000356169u^{22}+0.00964749u^{21}+\cdots+0.118336u+0.579177\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.0808741u^{22}-0.161358u^{21}+\cdots-0.855105u-6.43158\\0.000463824u^{22}+0.0115513u^{21}+\cdots+2.33256u-0.636277\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.0719338u^{22}-0.138716u^{21}+\cdots-1.07706u-4.45777\\0.00246360u^{22}-0.0160908u^{21}+\cdots+1.28584u-0.605302\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}0.0685212u^{22}+0.154326u^{21}+\cdots+0.0629189u+7.33623\\-0.0194331u^{22}-0.0508356u^{21}+\cdots-3.13401u+0.505016\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.00394024u^{22}+0.0385531u^{21}+\cdots+0.566623u+1.38271\\0.00190919u^{22}-0.00541351u^{21}+\cdots-1.10632u-0.276903\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}0.00394024u^{22}+0.0385531u^{21}+\cdots+0.566623u+1.38271\\0.00190919u^{22}-0.00541351u^{21}+\cdots-1.10632u-0.276903\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-1.60687-0.59883I$ $a=-0.51743-1.35178I$ $b=\ \ 0.19561-1.40284I$	$-10.15960-4.19504I$	$-11.29932+2.35235I$
$u=-1.60687+0.59883I$ $a=-0.51743+1.35178I$ $b=\ \ 0.19561+1.40284I$	$-10.15960+4.19504I$	$-11.29932-2.35235I$
$u=-1.47860-0.53478I$ $a=-0.72895-1.60096I$ $b=\ \ 0.54587-1.52621I$	$-18.3248-14.6898I$	$-11.82186+6.64707I$
$u=-1.47860+0.53478I$ $a=-0.72895+1.60096I$ $b=\ \ 0.54587+1.52621I$	$-18.3248+14.6898I$	$-11.82186-6.64707I$
$u=-1.27993$ $a=-0.837329$ $b=-1.69273$	-6.97375	-13.5441
$u=-0.832315$ $a=\ \ 0.323128$ $b=-0.310175$	-1.09471	-11.6781
$u=-0.754919-0.676112I$ $a=-0.316248-0.543061I$ $b=-0.420512-0.719649I$	$-2.03566-0.84759I$	$-5.54570-1.19524I$
$u=-0.754919+0.676112I$ $a=-0.316248+0.543061I$ $b=-0.420512+0.719649I$	$-2.03566+0.84759I$	$-5.54570+1.19524I$
$u=-0.702926-0.643969I$ $a=\ \ 0.414128+0.935437I$ $b=-0.386436+0.666877I$	$-2.01223-3.75776I$	$-5.33334+8.56871I$
$u=-0.702926+0.643969I$ $a=\ \ 0.414128-0.935437I$ $b=-0.386436-0.666877I$	$-2.01223+3.75776I$	$-5.33334-8.56871I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.12365 - 1.47479I$ $a = 0.102937 + 0.561813I$ $b = -0.109506 + 1.309224I$	$-5.14680 - 3.47388I$	$-11.56230 + 3.97702I$
$u = -0.12365 + 1.47479I$ $a = 0.102937 - 0.561813I$ $b = -0.109506 - 1.309224I$	$-5.14680 + 3.47388I$	$-11.56230 - 3.97702I$
$u = -0.113114$ $a = -6.92756$ $b = -0.880255$	-3.32968	-1.46423
$u = 0.146740 - 1.277214I$ $a = -0.284450 + 0.432546I$ $b = 0.33582 + 1.42592I$	$-13.1520 + 8.3676I$	$-10.67653 - 4.81997I$
$u = 0.146740 + 1.277214I$ $a = -0.284450 - 0.432546I$ $b = 0.33582 - 1.42592I$	$-13.1520 - 8.3676I$	$-10.67653 + 4.81997I$
$u = 0.474948 - 0.285362I$ $a = -0.003598 + 1.074414I$ $b = 0.565086 + 0.372468I$	$0.87976 + 1.13203I$	$3.15244 - 4.47998I$
$u = 0.474948 + 0.285362I$ $a = -0.003598 - 1.074414I$ $b = 0.565086 - 0.372468I$	$0.87976 - 1.13203I$	$3.15244 + 4.47998I$
$u = 1.04465$ $a = -1.26078$ $b = -0.0971819$	-6.54656	-14.0365
$u = 1.11050$ $a = 0.633591$ $b = 1.23682$	-0.342193	-19.7628
$u = 1.54005 - 0.52936I$ $a = 0.59381 - 1.52498I$ $b = -0.39680 - 1.43332I$	$-10.7273 + 10.3813I$	$-10.18639 - 6.73732I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.54005 + 0.52936I$ $a = 0.59381 + 1.52498I$ $b = -0.39680 + 1.43332I$	$-10.7273 - 10.3813I$	$-10.18639 + 6.73732I$
$u = 1.54033 - 0.69917I$ $a = 0.586771 - 1.151979I$ $b = 0.04263 - 1.48432I$	$-17.3595 - 1.0921I$	$-13.73412 + 0.45411I$
$u = 1.54033 + 0.69917I$ $a = 0.586771 + 1.151979I$ $b = 0.04263 + 1.48432I$	$-17.3595 + 1.0921I$	$-13.73412 - 0.45411I$

VI. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1, c_{11}	$(u-1)(u+1)^2(u^2+1)^2(u^{23}-u^{22}+\cdots-14u+1)$ $(u^{30}+3u^{29}+\cdots-8u+13)$
c_2	$(u-1)(u+1)^2(u^2-u+1)^2$ $(-1-2u+2u^2-2u^3+4u^4+6u^5-8u^6+2u^7-u^8-14u^9+8u^{10}+14u^{11}-5u^{12}-6u^{13}+$ $(u^{23}+2u^{22}+\cdots+71u+8)$
c_3	$(2u+1)(4u^2+4u-1)(9u^4+18u^3+9u^2+1)(8u^{23}-20u^{22}+\cdots-u-1)$ $(u^{30}+3u^{29}+\cdots-67460u+14279)$
c_4, c_9, c_{10}	$u(u^2-2)(u^4-u^2+1)$ $(-1-2u+2u^2+4u^3-14u^5+2u^6+26u^7+11u^8-34u^9-16u^{10}+24u^{11}+7u^{12}-8u^{13}-$ $(u^{23}+3u^{22}+\cdots+32u-8)$
c_5	$(2u-1)(4u^2-4u-1)(9u^4-18u^3+9u^2+1)(8u^{23}-20u^{22}+\cdots-u-1)$ $(u^{30}+3u^{29}+\cdots-67460u+14279)$
c_6	$(u-1)^2(u+1)(u^2+u+1)^2$ $(-1-2u+2u^2-2u^3+4u^4+6u^5-8u^6+2u^7-u^8-14u^9+8u^{10}+14u^{11}-5u^{12}-6u^{13}+$ $(u^{23}+2u^{22}+\cdots+71u+8)$
c_7, c_8	$(u-1)^2(u+1)(u^2+1)^2(u^{23}-u^{22}+\cdots-14u+1)$ $(u^{30}+3u^{29}+\cdots-8u+13)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_7, c_8 c_{11}	$(y-1)^3(y+1)^4(y^{23}+19y^{22}+\cdots+112y-1)$ $(y^{30}+23y^{29}+\cdots-1572y+169)$
c_2, c_6	$(y-1)^3(y^2+y+1)^2$ $(-1+8y+12y^2-52y^3-18y^4+168y^5-74y^6-254y^7+295y^8+104y^9-462y^{10}+450y^{11}$ $(y^{23}-14y^{22}+\cdots+5473y-64)$
c_3, c_5	$(4y-1)(16y^2-24y+1)(81y^4-162y^3+99y^2+18y+1)$ $(64y^{23}-1392y^{22}+\cdots-37y-1)$ $(y^{30}-21y^{29}+\cdots-2895344340y+203889841)$
c_4, c_9, c_{10}	$y(y-2)^2(y^2-y+1)^2$ $(-1+8y-20y^2+76y^3-202y^4+464y^5-1022y^6+1778y^7-2561y^8+2960y^9-2482y^{10}+$ $(y^{23}-23y^{22}+\cdots+672y-64)$