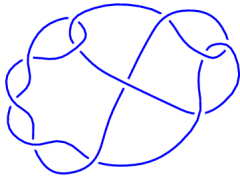
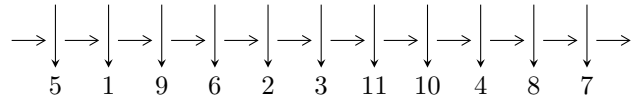


11a<sub>95</sub> (K11a<sub>95</sub>)

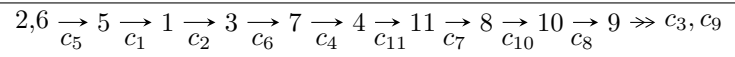


1

**Arc Sequences**



**Solving Sequence**



**Representation Ideals**

$$I = I_1^u$$

$$I_1^u = \langle u^{36} + u^{35} + \dots - 4u - 1 \rangle$$

There are 1 irreducible components with 36 representations.

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

$$\text{I. } \Gamma_1^u = \langle u^{36} + u^{35} + \dots - 4u - 1 \rangle$$

(i) Arc colorings

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

$$a_6 = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} -u^9 + 2u^7 - 3u^5 + 2u^3 - u \\ -u^9 + u^7 - u^5 + u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u^{16} + 3u^{14} - 7u^{12} + 10u^{10} - 11u^8 + 8u^6 - 4u^4 + 1 \\ -u^{16} + 2u^{14} - 4u^{12} + 4u^{10} - 2u^8 + 2u^4 - 2u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -u^{23} + 4u^{21} + \dots + 4u^3 - 2u \\ -u^{23} + 3u^{21} + \dots + 2u^3 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -u^{30} + 5u^{28} + \dots + 2u^2 + 1 \\ -u^{30} + 4u^{28} + \dots + 2u^4 - 3u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{34} + 5u^{32} + \dots + u^2 + 1 \\ -u^{35} - u^{34} + \dots + 4u + 1 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -u^{34} + 5u^{32} + \dots + u^2 + 1 \\ -u^{35} - u^{34} + \dots + 4u + 1 \end{pmatrix}$$

(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
$u = -1.029711 - 0.270133I$	$6.73510 + 0.05242I$	$-9.91031 + 1.11538I$
$u = -1.029711 + 0.270133I$	$6.73510 - 0.05242I$	$-9.91031 - 1.11538I$
$u = -1.005164 - 0.763200I$	$13.0885 - 11.7607I$	$-5.64793 + 7.43079I$
$u = -1.005164 + 0.763200I$	$13.0885 + 11.7607I$	$-5.64793 - 7.43079I$
$u = -0.978294 - 0.723773I$	$3.52152 - 9.06176I$	$-8.19420 + 9.30306I$
$u = -0.978294 + 0.723773I$	$3.52152 + 9.06176I$	$-8.19420 - 9.30306I$
$u = -0.931320 - 0.665651I$	$-0.44906 - 4.79281I$	$-14.2901 + 6.9019I$
$u = -0.931320 + 0.665651I$	$-0.44906 + 4.79281I$	$-14.2901 - 6.9019I$
$u = -0.827979 - 0.168454I$	$-0.731880 - 0.351895I$	$-10.65376 + 0.66893I$
$u = -0.827979 + 0.168454I$	$-0.731880 + 0.351895I$	$-10.65376 - 0.66893I$
$u = -0.795382 - 0.633860I$	$-0.001943 - 0.306901I$	$-12.89345 - 1.58755I$
$u = -0.795382 + 0.633860I$	$-0.001943 + 0.306901I$	$-12.89345 + 1.58755I$
$u = -0.741334 - 0.854303I$	$13.9035 + 5.7329I$	$-4.26372 - 2.53612I$
$u = -0.741334 + 0.854303I$	$13.9035 - 5.7329I$	$-4.26372 + 2.53612I$
$u = -0.733515 - 0.778479I$	$4.26116 + 3.38021I$	$-6.36942 - 4.06127I$
$u = -0.733515 + 0.778479I$	$4.26116 - 3.38021I$	$-6.36942 + 4.06127I$
$u = -0.404870$	$-0.709168$	$-14.3098$
$u = -0.086623 - 0.514598I$	$1.42228 - 2.05301I$	$-4.86610 + 4.82950I$
$u = -0.086623 + 0.514598I$	$1.42228 + 2.05301I$	$-4.86610 - 4.82950I$
$u = -0.011219 - 0.704019I$	$10.03415 - 3.29411I$	$-3.98637 + 2.43304I$
$u = -0.011219 + 0.704019I$	$10.03415 + 3.29411I$	$-3.98637 - 2.43304I$
$u = 0.750710 - 0.853582I$	$14.07567 + 0.94615I$	$-3.96028 - 2.12397I$
$u = 0.750710 + 0.853582I$	$14.07567 - 0.94615I$	$-3.96028 + 2.12397I$
$u = 0.782430 - 0.779304I$	$5.14913 + 1.38552I$	$-3.93165 - 2.60854I$
$u = 0.782430 + 0.779304I$	$5.14913 - 1.38552I$	$-3.93165 + 2.60854I$
$u = 0.870204 - 0.708836I$	$2.46542 + 2.71564I$	$-4.42006 - 3.22989I$
$u = 0.870204 + 0.708836I$	$2.46542 - 2.71564I$	$-4.42006 + 3.22989I$
$u = 0.951308 - 0.739370I$	$4.63406 + 4.35057I$	$-4.96741 - 3.00405I$
$u = 0.951308 + 0.739370I$	$4.63406 - 4.35057I$	$-4.96741 + 3.00405I$
$u = 0.957347$	$-4.25142$	$-21.1242$

Solution to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.970808 - 0.146946I$	$-1.79064 + 4.12069I$	$-14.4783 - 7.6804I$
$u = 0.970808 + 0.146946I$	$-1.79064 - 4.12069I$	$-14.4783 + 7.6804I$
$u = 0.999925 - 0.767262I$	$13.3053 + 5.0936I$	$-5.21713 - 2.79441I$
$u = 0.999925 + 0.767262I$	$13.3053 - 5.0936I$	$-5.21713 + 2.79441I$
$u = 1.038917 - 0.253422I$	$6.61933 + 6.45885I$	$-10.23279 - 5.88059I$
$u = 1.038917 + 0.253422I$	$6.61933 - 6.45885I$	$-10.23279 + 5.88059I$

## II. u-Polynomials

Crossings	u-Polynomials at each crossings
$c_1, c_5$	$(u^{36} + u^{35} + \dots - 4u - 1)$
$c_2, c_4$	$(u^{36} + 11u^{35} + \dots + 6u + 1)$
$c_3, c_9$	$(u^{36} + u^{35} + \dots + 2u - 1)$
$c_6$	$(u^{36} + u^{35} + \dots + 366u - 97)$
$c_7, c_8, c_{10}$ $c_{11}$	$(u^{36} + 7u^{35} + \dots + 6u + 1)$

### III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
$c_1, c_5$	$(y^{36} - 11y^{35} + \dots - 6y + 1)$
$c_2, c_4$	$(y^{36} + 29y^{35} + \dots - 62y + 1)$
$c_3, c_9$	$(y^{36} - 7y^{35} + \dots - 6y + 1)$
$c_6$	$(y^{36} + 17y^{35} + \dots - 13870y + 9409)$
$c_7, c_8, c_{10}$ $c_{11}$	$(y^{36} + 45y^{35} + \dots - 14y + 1)$