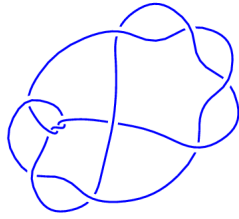
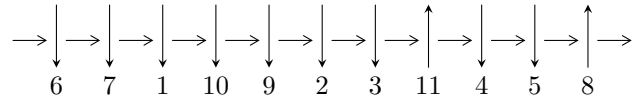


11a<sub>308</sub> (K11a<sub>308</sub>)

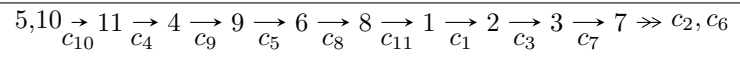


1

**Arc Sequences**



**Solving Sequence**



**Representation Ideals**

$$I = I_1^u$$

$$I_1^u = \langle u^{35} + u^{34} + \dots - 2u + 1 \rangle$$

There are 1 irreducible components with 35 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>”

$$\text{I. } \Gamma_1^u = \langle u^{35} + u^{34} + \dots - 2u + 1 \rangle$$

(i) Arc colorings

$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -u \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u \\ -u^3 + u \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -u^4 + u^2 + 1 \\ u^6 - 2u^4 + u^2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} -u^9 + 4u^7 - 5u^5 + 2u^3 - u \\ u^9 - 3u^7 + u^5 + 2u^3 + u \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{19} - 8u^{17} + 24u^{15} - 30u^{13} + 7u^{11} + 10u^9 + 4u^7 - 6u^5 - 3u^3 - 2u \\ -u^{21} + 9u^{19} + \dots + u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^{20} + 9u^{18} + \dots + u^2 + 1 \\ u^{20} - 8u^{18} + 24u^{16} - 30u^{14} + 7u^{12} + 10u^{10} + 4u^8 - 6u^6 - 3u^4 - 2u^2 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^{34} - 15u^{32} + \dots - u^2 + 1 \\ -u^{34} + u^{33} + \dots + 3u - 1 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} u^{34} - 15u^{32} + \dots - u^2 + 1 \\ -u^{34} + u^{33} + \dots + 3u - 1 \end{pmatrix}$$

(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
$u = -1.48595 - 0.19714I$	$-18.4666 + 0.3155I$	$-17.6053 + 0.1586I$
$u = -1.48595 + 0.19714I$	$-18.4666 - 0.3155I$	$-17.6053 - 0.1586I$
$u = -1.46917 - 0.25360I$	$-17.6166 - 10.8655I$	$-16.5622 + 5.6789I$
$u = -1.46917 + 0.25360I$	$-17.6166 + 10.8655I$	$-16.5622 - 5.6789I$
$u = -1.45233 - 0.22468I$	$-7.26272 - 4.90638I$	$-11.00863 + 2.94514I$
$u = -1.45233 + 0.22468I$	$-7.26272 + 4.90638I$	$-11.00863 - 2.94514I$
$u = -1.35428$	$-5.67856$	$-17.2472$
$u = -1.284921 - 0.176915I$	$-2.74426 - 4.13151I$	$-10.06219 + 7.59188I$
$u = -1.284921 + 0.176915I$	$-2.74426 + 4.13151I$	$-10.06219 - 7.59188I$
$u = -1.09220$	$-7.72425$	$-11.4234$
$u = -0.650180$	$-7.56446$	$-13.6892$
$u = -0.478538 - 0.569763I$	$-3.71886 + 1.25391I$	$-12.53849 - 1.04095I$
$u = -0.478538 + 0.569763I$	$-3.71886 - 1.25391I$	$-12.53849 + 1.04095I$
$u = -0.404028 - 0.654601I$	$-3.38071 - 5.28518I$	$-11.19312 + 7.66639I$
$u = -0.404028 + 0.654601I$	$-3.38071 + 5.28518I$	$-11.19312 - 7.66639I$
$u = -0.140885 - 0.636642I$	$-5.27877 - 2.85435I$	$-7.73114 + 4.21990I$
$u = -0.140885 + 0.636642I$	$-5.27877 + 2.85435I$	$-7.73114 - 4.21990I$
$u = 0.062444 - 0.564757I$	$1.40484 + 1.42814I$	$-2.59292 - 5.83605I$
$u = 0.062444 + 0.564757I$	$1.40484 - 1.42814I$	$-2.59292 + 5.83605I$
$u = 0.321346$	$-0.640564$	$-15.8308$
$u = 0.401418 - 0.595064I$	$-1.30259 + 1.88118I$	$-7.16532 - 3.48234I$
$u = 0.401418 + 0.595064I$	$-1.30259 - 1.88118I$	$-7.16532 + 3.48234I$
$u = 0.416127 - 0.687266I$	$-11.53564 + 7.43008I$	$-13.0479 - 5.8668I$
$u = 0.416127 + 0.687266I$	$-11.53564 - 7.43008I$	$-13.0479 + 5.8668I$
$u = 0.525382 - 0.592520I$	$-11.96024 - 3.16210I$	$-14.1562 - 0.1993I$
$u = 0.525382 + 0.592520I$	$-11.96024 + 3.16210I$	$-14.1562 + 0.1993I$
$u = 1.245763 - 0.112991I$	$-2.03937 + 0.97518I$	$-7.22361 + 0.37761I$
$u = 1.245763 + 0.112991I$	$-2.03937 - 0.97518I$	$-7.22361 - 0.37761I$
$u = 1.313192 - 0.225618I$	$-9.81072 + 5.98333I$	$-13.3282 - 5.5351I$
$u = 1.313192 + 0.225618I$	$-9.81072 - 5.98333I$	$-13.3282 + 5.5351I$

Solution to $I_1^u$	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.42496$	$-13.8091$	$-17.9866$
$u = 1.46000 - 0.24290I$	$-9.38489 + 8.56887I$	$-14.7051 - 7.1915I$
$u = 1.46000 + 0.24290I$	$-9.38489 - 8.56887I$	$-14.7051 + 7.1915I$
$u = 1.46668 - 0.20359I$	$-9.96671 + 1.56878I$	$-15.9909 + 0.8926I$
$u = 1.46668 + 0.20359I$	$-9.96671 - 1.56878I$	$-15.9909 - 0.8926I$

## II. u-Polynomials

Crossings	u-Polynomials at each crossings
$c_1, c_2, c_6$ $c_7$	$(u^{35} + u^{34} + \dots - 2u + 1)$
$c_3$	$(u^{35} + 11u^{34} + \dots + 444u + 113)$
$c_4, c_9, c_{10}$	$(u^{35} + u^{34} + \dots - 2u + 1)$
$c_5$	$(u^{35} + 3u^{34} + \dots + 54u + 9)$
$c_8, c_{11}$	$(u^{35} + 5u^{34} + \dots + 4u - 1)$

### III. Riley Polynomials

Crossings	Riley Polynomials at each crossings
$c_1, c_2, c_6$ $c_7$	$(y^{35} - 41y^{34} + \dots + 6y - 1)$
$c_3$	$(y^{35} - 17y^{34} + \dots + 162106y - 12769)$
$c_4, c_9, c_{10}$	$(y^{35} - 33y^{34} + \dots + 6y - 1)$
$c_5$	$(y^{35} - 13y^{34} + \dots + 3618y - 81)$
$c_8, c_{11}$	$(y^{35} + 31y^{34} + \dots + 298y - 1)$