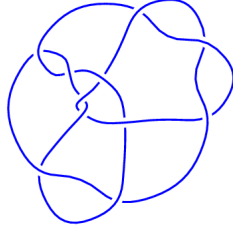
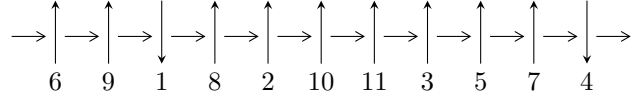


11a₂₉₅ (K11a₂₉₅)

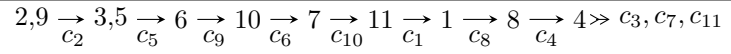


1

Arc Sequences



Solving Sequence



Representation Ideals

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

$$\begin{aligned} I_1^u &= \langle u^{12} - u^{11} + 5u^{10} - u^9 + 12u^8 + 2u^7 + 18u^6 + 8u^5 + 16u^4 + 7u^3 + 7u^2 + 2u + 1, \\ &\quad 2u^{11} - u^{10} + 7u^9 + 5u^8 + 14u^7 + 17u^6 + 19u^5 + 29u^4 + 15u^3 + 16u^2 + b + 4u + 3, \\ &\quad - 2u^{11} + 6u^{10} - 16u^9 + 24u^8 - 37u^7 + 44u^6 - 46u^5 + 47u^4 - 24u^3 + 28u^2 + a - 3u + 8 \rangle \\ I_2^u &= \langle u^{66} + 2u^{65} + \dots + 337u + 121, \\ &\quad 1.18562 \times 10^{134}u^{65} - 1.81175 \times 10^{133}u^{64} + \dots + 9.47090 \times 10^{134}b - 3.58348 \times 10^{136}, \\ &\quad - 3.35223 \times 10^{136}u^{65} - 4.73290 \times 10^{136}u^{64} + \dots + 1.14598 \times 10^{137}a + 1.61305 \times 10^{138} \rangle \end{aligned}$$

There are 2 irreducible components with 78 representations.

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

$$I_1^u = \langle u^{12} - u^{11} + \dots + 2u + 1, 2u^{11} - u^{10} + \dots + b + 3, -2u^{11} + 6u^{10} + \dots + a + 8 \rangle \quad \text{I.}$$

(i) Arc colorings

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

$$a_9 = \begin{pmatrix} 2u^{11} - 6u^{10} + \dots + 3u - 8 \\ -2u^{11} + u^{10} + \dots - 4u - 3 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 4u^{11} - 3u^{10} + \dots + 19u + 9 \\ -u^{10} + u^9 - 4u^8 - 8u^6 - 2u^5 - 10u^4 - 6u^3 - 6u^2 - u \end{pmatrix}$$

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

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

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

$$a_7 = \begin{pmatrix} -3u^{11} + 8u^{10} + \dots - 8u + 7 \\ 2u^{10} - 2u^9 + 10u^8 - 3u^7 + 25u^6 + 36u^4 + 9u^3 + 29u^2 + 7u + 8 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -7u^{11} + 10u^{10} + \dots - 10u^2 - 20u \\ -u^9 + u^8 - 4u^7 - 8u^5 - 2u^4 - 10u^3 - 5u^2 - 6u \end{pmatrix}$$

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

$$a_8 = \begin{pmatrix} 4u^{11} - 6u^{10} + \dots + 12u + 2 \\ u^{11} - 4u^{10} + \dots - 6u - 5 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3u^{11} - 2u^{10} + \dots + 13u + 7 \\ -u^{10} + u^9 - 4u^8 - 8u^6 - 2u^5 - 10u^4 - 6u^3 - 6u^2 \end{pmatrix}$$

$$a_4 = \begin{pmatrix} 3u^{11} - 2u^{10} + \dots + 13u + 7 \\ -u^{10} + u^9 - 4u^8 - 8u^6 - 2u^5 - 10u^4 - 6u^3 - 6u^2 \end{pmatrix}$$

(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
$u = -0.498736 - 1.049043I$ $a = 0.344571 + 0.179120I$ $b = 0.436264 - 0.375928I$	$1.64985 + 2.57365I$	$12.02620 - 3.39540I$
$u = -0.498736 + 1.049043I$ $a = 0.344571 - 0.179120I$ $b = 0.436264 + 0.375928I$	$1.64985 - 2.57365I$	$12.02620 + 3.39540I$
$u = -0.300410 - 0.503097I$ $a = 0.13606 - 3.54713I$ $b = -0.276860 - 0.753139I$	$7.64591 + 4.32752I$	$14.4982 - 5.1187I$
$u = -0.300410 + 0.503097I$ $a = 0.13606 + 3.54713I$ $b = -0.276860 + 0.753139I$	$7.64591 - 4.32752I$	$14.4982 + 5.1187I$
$u = -0.296152 - 0.699894I$ $a = 0.539662 + 1.130002I$ $b = 0.476182 + 0.586558I$	$0.99987 + 2.95882I$	$8.95384 - 10.28538I$
$u = -0.296152 + 0.699894I$ $a = 0.539662 - 1.130002I$ $b = 0.476182 - 0.586558I$	$0.99987 - 2.95882I$	$8.95384 + 10.28538I$
$u = 0.100055 - 0.813215I$ $a = -0.471575 + 1.069468I$ $b = -0.57539 - 1.56859I$	$5.02229 - 1.34240I$	$13.23433 + 1.17063I$
$u = 0.100055 + 0.813215I$ $a = -0.471575 - 1.069468I$ $b = -0.57539 + 1.56859I$	$5.02229 + 1.34240I$	$13.23433 - 1.17063I$
$u = 0.533873 - 1.256768I$ $a = -0.709720 - 0.222372I$ $b = -0.211327 + 1.361949I$	$-4.35770 - 2.95981I$	$6.70212 - 1.32008I$
$u = 0.533873 + 1.256768I$ $a = -0.709720 + 0.222372I$ $b = -0.211327 - 1.361949I$	$-4.35770 + 2.95981I$	$6.70212 + 1.32008I$

	Solution to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u =$	$0.96137 - 1.43587I$		
$a =$	$0.661001 - 0.084483I$	$-1.09062 - 4.53454I$	$3.08537 + 5.69650I$
$b =$	$0.151135 - 1.234645I$		
$u =$	$0.96137 + 1.43587I$		
$a =$	$0.661001 + 0.084483I$	$-1.09062 + 4.53454I$	$3.08537 - 5.69650I$
$b =$	$0.151135 + 1.234645I$		

$$\text{II. } I_2^u = \langle u^{66} + 2u^{65} + \dots + 337u + 121, 1.19 \times 10^{134}u^{65} - 1.81 \times 10^{133}u^{64} + \dots + 9.47 \times 10^{134}b - 3.58 \times 10^{136}, -3.35 \times 10^{136}u^{65} - 4.73 \times 10^{136}u^{64} + \dots + 1.15 \times 10^{137}a + 1.61 \times 10^{138} \rangle$$

(i) Arc colorings

$$\begin{aligned} a_2 &= \begin{pmatrix} 1 \\ 0 \end{pmatrix} \\ a_9 &= \begin{pmatrix} 0.292521u^{65} + 0.413000u^{64} + \dots + 4.66027u - 14.0757 \\ -0.125186u^{65} + 0.0191297u^{64} + \dots + 79.1053u + 37.8368 \end{pmatrix} \\ a_3 &= \begin{pmatrix} -0.0851133u^{65} + 0.0788565u^{64} + \dots + 92.4004u + 42.2237 \\ -0.678774u^{65} - 1.38228u^{64} + \dots - 188.600u - 44.8380 \end{pmatrix} \\ a_5 &= \begin{pmatrix} 0 \\ u \end{pmatrix} \\ a_6 &= \begin{pmatrix} u \\ u \end{pmatrix} \\ a_{10} &= \begin{pmatrix} 0.292521u^{65} + 0.413000u^{64} + \dots + 4.66027u - 14.0757 \\ 0.144207u^{65} + 0.344911u^{64} + \dots + 56.5220u + 17.0196 \end{pmatrix} \\ a_7 &= \begin{pmatrix} 0.265775u^{65} + 0.709300u^{64} + \dots + 177.381u + 47.1015 \\ 0.00974749u^{65} + 0.661588u^{64} + \dots + 233.587u + 92.0427 \end{pmatrix} \\ a_{11} &= \begin{pmatrix} -0.497188u^{65} - 0.770818u^{64} + \dots - 10.5479u + 13.3467 \\ 0.177945u^{65} - 0.358838u^{64} + \dots - 136.543u - 85.8897 \end{pmatrix} \\ a_1 &= \begin{pmatrix} u^2 + 1 \\ u^2 \end{pmatrix} \\ a_8 &= \begin{pmatrix} -0.239273u^{65} - 0.560967u^{64} + \dots - 84.5604u - 19.8704 \\ 1.00693u^{65} + 0.956754u^{64} + \dots - 102.931u - 115.394 \end{pmatrix} \\ a_4 &= \begin{pmatrix} -0.118077u^{65} + 0.0396210u^{64} + \dots + 96.8931u + 46.0532 \\ -0.695708u^{65} - 1.45455u^{64} + \dots - 208.600u - 52.7154 \end{pmatrix} \\ a_4 &= \begin{pmatrix} -0.118077u^{65} + 0.0396210u^{64} + \dots + 96.8931u + 46.0532 \\ -0.695708u^{65} - 1.45455u^{64} + \dots - 208.600u - 52.7154 \end{pmatrix} \end{aligned}$$

(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
$u = -1.354558 - 0.246255I$ $a = -0.369961 + 0.652290I$ $b = -0.418270 + 1.216759I$	$7.53925 - 8.57953I$	$10.36804 + 6.24736I$
$u = -1.354558 + 0.246255I$ $a = -0.369961 - 0.652290I$ $b = -0.418270 - 1.216759I$	$7.53925 + 8.57953I$	$10.36804 - 6.24736I$
$u = -1.116290 - 0.041930I$ $a = 0.408138 + 0.706863I$ $b = 0.420123 + 1.112897I$	$1.13230 + 5.61385I$	$7.73447 - 7.80820I$
$u = -1.116290 + 0.041930I$ $a = 0.408138 - 0.706863I$ $b = 0.420123 - 1.112897I$	$1.13230 - 5.61385I$	$7.73447 + 7.80820I$
$u = -0.85216 - 1.36098I$ $a = -0.692019 - 0.151226I$ $b = -0.115704 - 1.020082I$	$0.16047 + 3.95702I$	$8.80042 - 3.39843I$
$u = -0.85216 + 1.36098I$ $a = -0.692019 + 0.151226I$ $b = -0.115704 + 1.020082I$	$0.16047 - 3.95702I$	$8.80042 + 3.39843I$
$u = -0.845743$ $a = 1.38571$ $b = 0.638431$	6.81634	14.5151
$u = -0.66897 - 1.35203I$ $a = 1.208238 - 0.208542I$ $b = 0.55812 + 1.41815I$	$3.9251 + 15.5092I$	$8.61877 - 7.80735I$
$u = -0.66897 + 1.35203I$ $a = 1.208238 + 0.208542I$ $b = 0.55812 - 1.41815I$	$3.9251 - 15.5092I$	$8.61877 + 7.80735I$
$u = -0.634117 - 0.759014I$ $a = 0.47320 + 1.68936I$ $b = -0.200360 + 0.695523I$	$7.42737 + 2.83943I$	$11.81996 - 1.03899I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.634117 + 0.759014I$ $a = 0.47320 - 1.68936I$ $b = -0.200360 - 0.695523I$	$7.42737 - 2.83943I$	$11.81996 + 1.03899I$
$u = -0.583417 - 0.964228I$ $a = 1.320965 + 0.483188I$ $b = 0.669641 + 0.580855I$	$6.78842 + 2.02734I$	$12.06412 - 3.13769I$
$u = -0.583417 + 0.964228I$ $a = 1.320965 - 0.483188I$ $b = 0.669641 - 0.580855I$	$6.78842 - 2.02734I$	$12.06412 + 3.13769I$
$u = -0.554991 - 0.832246I$ $a = -0.365924 - 0.583201I$ $b = -0.006605 - 0.382994I$	$0.63556 + 2.23216I$	$3.27314 + 0.28739I$
$u = -0.554991 + 0.832246I$ $a = -0.365924 + 0.583201I$ $b = -0.006605 + 0.382994I$	$0.63556 - 2.23216I$	$3.27314 - 0.28739I$
$u = -0.51147 - 1.33806I$ $a = -1.057054 + 0.307355I$ $b = -0.57803 - 1.42790I$	$-3.18615 + 11.21571I$	$5.77248 - 8.25519I$
$u = -0.51147 + 1.33806I$ $a = -1.057054 - 0.307355I$ $b = -0.57803 + 1.42790I$	$-3.18615 - 11.21571I$	$5.77248 + 8.25519I$
$u = -0.468529 - 0.501931I$ $a = -1.002967 - 0.967865I$ $b = -0.489851 - 0.829291I$	$1.02770 + 2.29601I$	$9.69444 - 1.14356I$
$u = -0.468529 + 0.501931I$ $a = -1.002967 + 0.967865I$ $b = -0.489851 + 0.829291I$	$1.02770 - 2.29601I$	$9.69444 + 1.14356I$
$u = -0.382935 - 1.209541I$ $a = -0.791307 + 0.504739I$ $b = -0.672686 + 0.122268I$	$2.99874 + 4.32150I$	$10.39713 - 4.09568I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.382935 + 1.209541I$ $a = -0.791307 - 0.504739I$ $b = -0.672686 - 0.122268I$	$2.99874 - 4.32150I$	$10.39713 + 4.09568I$
$u = -0.36799 - 1.45280I$ $a = 0.700985 - 0.240357I$ $b = 0.044674 + 1.054040I$	$-3.85841 + 0.35943I$	$2.42133 + 0.09883I$
$u = -0.36799 + 1.45280I$ $a = 0.700985 + 0.240357I$ $b = 0.044674 - 1.054040I$	$-3.85841 - 0.35943I$	$2.42133 - 0.09883I$
$u = -0.316427 - 1.238150I$ $a = 0.833635 - 0.467169I$ $b = 0.64639 + 1.48451I$	$-3.39375 + 5.20124I$	$6.22642 - 6.09033I$
$u = -0.316427 + 1.238150I$ $a = 0.833635 + 0.467169I$ $b = 0.64639 - 1.48451I$	$-3.39375 - 5.20124I$	$6.22642 + 6.09033I$
$u = -0.298966$ $a = -1.58840$ $b = -0.368557$	0.660290	15.1129
$u = -0.192173 - 0.876307I$ $a = 0.274596 + 0.060055I$ $b = 0.97672 - 1.47152I$	$4.71138 + 2.03235I$	$10.76063 - 8.45784I$
$u = -0.192173 + 0.876307I$ $a = 0.274596 - 0.060055I$ $b = 0.97672 + 1.47152I$	$4.71138 - 2.03235I$	$10.76063 + 8.45784I$
$u = -0.166328 - 0.889378I$ $a = -0.178912 + 1.257134I$ $b = -0.26921 - 1.73433I$	$4.74716 - 0.24143I$	$11.20357 - 1.33057I$
$u = -0.166328 + 0.889378I$ $a = -0.178912 - 1.257134I$ $b = -0.26921 + 1.73433I$	$4.74716 + 0.24143I$	$11.20357 + 1.33057I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.131125 - 1.039573I$		
$a = 0.754120 - 0.339995I$	$-2.00698 + 1.67505I$	$2.85750 - 4.67727I$
$b = 0.646631 + 0.152437I$		
$u = -0.131125 + 1.039573I$		
$a = 0.754120 + 0.339995I$	$-2.00698 - 1.67505I$	$2.85750 + 4.67727I$
$b = 0.646631 - 0.152437I$		
$u = -0.129596 - 0.501602I$		
$a = -1.57343 - 1.02791I$	$1.05491 + 2.33150I$	$8.86448 + 1.77699I$
$b = -0.580495 - 0.820287I$		
$u = -0.129596 + 0.501602I$		
$a = -1.57343 + 1.02791I$	$1.05491 - 2.33150I$	$8.86448 - 1.77699I$
$b = -0.580495 + 0.820287I$		
$u = 0.069243 - 1.205932I$		
$a = -0.369347 + 1.150265I$	$-1.28963 - 3.11000I$	$6.45685 + 4.52196I$
$b = 0.083413 - 1.085398I$		
$u = 0.069243 + 1.205932I$		
$a = -0.369347 - 1.150265I$	$-1.28963 + 3.11000I$	$6.45685 - 4.52196I$
$b = 0.083413 + 1.085398I$		
$u = 0.108265 - 0.901145I$		
$a = 0.66170 - 2.91284I$	$6.59255 - 4.44136I$	$6.67316 + 4.43410I$
$b = -0.141222 + 1.012845I$		
$u = 0.108265 + 0.901145I$		
$a = 0.66170 + 2.91284I$	$6.59255 + 4.44136I$	$6.67316 - 4.43410I$
$b = -0.141222 - 1.012845I$		
$u = 0.211446 - 0.973281I$		
$a = 1.47266 + 0.60580I$	$6.10476 + 3.03885I$	$9.55611 - 2.46724I$
$b = 0.662180 + 0.862296I$		
$u = 0.211446 + 0.973281I$		
$a = 1.47266 - 0.60580I$	$6.10476 - 3.03885I$	$9.55611 + 2.46724I$
$b = 0.662180 - 0.862296I$		

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.267187 - 1.100177I$ $a = -1.117029 - 0.381105I$ $b = -0.32459 + 1.44481I$	$-5.36608 - 1.78436I$	$3.12908 - 1.84447I$
$u = 0.267187 + 1.100177I$ $a = -1.117029 + 0.381105I$ $b = -0.32459 - 1.44481I$	$-5.36608 + 1.78436I$	$3.12908 + 1.84447I$
$u = 0.33589 - 1.60254I$ $a = 0.074889 + 0.284896I$ $b = 0.023131 - 1.237405I$	$-1.08058 - 2.59004I$	$5.02423 + 1.90961I$
$u = 0.33589 + 1.60254I$ $a = 0.074889 - 0.284896I$ $b = 0.023131 + 1.237405I$	$-1.08058 + 2.59004I$	$5.02423 - 1.90961I$
$u = 0.337298 - 0.972157I$ $a = -0.638983 - 0.271543I$ $b = -1.40483 + 0.19256I$	$1.69376 - 4.59816I$	$10.4204 + 9.7829I$
$u = 0.337298 + 0.972157I$ $a = -0.638983 + 0.271543I$ $b = -1.40483 - 0.19256I$	$1.69376 + 4.59816I$	$10.4204 - 9.7829I$
$u = 0.343310 - 0.961201I$ $a = -0.618118 + 0.380697I$ $b = -0.538056 - 0.549223I$	$1.13118 - 1.76995I$	$5.98304 - 2.62479I$
$u = 0.343310 + 0.961201I$ $a = -0.618118 - 0.380697I$ $b = -0.538056 + 0.549223I$	$1.13118 + 1.76995I$	$5.98304 + 2.62479I$
$u = 0.410191 - 1.244111I$ $a = 1.282277 + 0.327942I$ $b = 0.387740 - 1.305755I$	$-6.38275 - 5.64915I$	$1.66768 + 6.17247I$
$u = 0.410191 + 1.244111I$ $a = 1.282277 - 0.327942I$ $b = 0.387740 + 1.305755I$	$-6.38275 + 5.64915I$	$1.66768 - 6.17247I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.527410 - 1.279417I$ $a = -1.50944 - 0.32278I$ $b = -0.430569 + 1.221428I$	$-0.32445 - 8.55031I$	$6.94019 + 6.62913I$
$u = 0.527410 + 1.279417I$ $a = -1.50944 + 0.32278I$ $b = -0.430569 - 1.221428I$	$-0.32445 + 8.55031I$	$6.94019 - 6.62913I$
$u = 0.550607 - 0.350148I$ $a = 0.714393 + 0.999376I$ $b = 0.809871 - 0.432123I$	$3.37039 + 1.11848I$	$13.33885 - 1.54614I$
$u = 0.550607 + 0.350148I$ $a = 0.714393 - 0.999376I$ $b = 0.809871 + 0.432123I$	$3.37039 - 1.11848I$	$13.33885 + 1.54614I$
$u = 0.555703 - 1.115224I$ $a = 0.902903 + 0.292985I$ $b = 1.212907 - 0.088188I$	$8.62445 - 9.32694I$	$11.47318 + 6.49002I$
$u = 0.555703 + 1.115224I$ $a = 0.902903 - 0.292985I$ $b = 1.212907 + 0.088188I$	$8.62445 + 9.32694I$	$11.47318 - 6.49002I$
$u = 0.699120 - 0.048731I$ $a = -0.533265 + 1.119477I$ $b = -0.086918 + 1.120974I$	$-2.54829 - 1.52445I$	$3.35567 + 4.49090I$
$u = 0.699120 + 0.048731I$ $a = -0.533265 - 1.119477I$ $b = -0.086918 - 1.120974I$	$-2.54829 + 1.52445I$	$3.35567 - 4.49090I$
$u = 0.72595 - 1.30723I$ $a = -0.689031 - 0.055544I$ $b = -0.142627 + 1.332549I$	$-4.54149 - 3.48085I$	$1.46862 + 11.56926I$
$u = 0.72595 + 1.30723I$ $a = -0.689031 + 0.055544I$ $b = -0.142627 - 1.332549I$	$-4.54149 + 3.48085I$	$1.46862 - 11.56926I$

Solution to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.861840 - 0.432177I$ $a = -0.944922 - 0.929606I$ $b = -0.805170 + 0.171054I$	$10.80041 + 4.11654I$	$14.8793 - 1.1556I$
$u = 0.861840 + 0.432177I$ $a = -0.944922 + 0.929606I$ $b = -0.805170 - 0.171054I$	$10.80041 - 4.11654I$	$14.8793 + 1.1556I$
$u = 0.945865 - 0.014510I$ $a = 0.942500 + 0.675101I$ $b = 0.271741 + 1.131805I$	$3.45574 + 3.28085I$	$8.60109 - 3.29735I$
$u = 0.945865 + 0.014510I$ $a = 0.942500 - 0.675101I$ $b = 0.271741 - 1.131805I$	$3.45574 - 3.28085I$	$8.60109 + 3.29735I$
$u = 1.05411 - 1.29516I$ $a = 0.701414 - 0.260601I$ $b = 0.156972 - 1.390425I$	$0.60146 - 4.40690I$	$8.84170 + 3.71176I$
$u = 1.05411 + 1.29516I$ $a = 0.701414 + 0.260601I$ $b = 0.156972 + 1.390425I$	$0.60146 + 4.40690I$	$8.84170 - 3.71176I$

III. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u^{12} - u^{11} + \dots + 2u + 1)(u^{66} + 2u^{65} + \dots + 337u + 121)$
c_2	$(u^{12} + 6u^{10} + \dots - 3u + 1)(u^{66} + u^{65} + \dots + 262u - 97)$
c_3	$(u^{12} + 2u^{11} + \dots - u + 1)(u^{66} + 3u^{65} + \dots - 110u + 13)$
c_4	$(u^{12} + 2u^{10} - 3u^9 + 7u^8 - 6u^6 + 8u^5 + 7u^4 - 2u^3 + u^2 + 3u + 1)$ $(u^{66} + 5u^{65} + \dots - 3840u - 1447)$
c_5	$(u^{12} + u^{11} + \dots - 2u + 1)(u^{66} + 2u^{65} + \dots + 337u + 121)$
c_6	$(u^{12} - 8u^{10} + 24u^8 - 32u^6 - u^5 + 18u^4 + u^3 - 3u^2 + 1)$ $(u^{66} + 5u^{65} + \dots + 3u - 1)$
c_7	$(u^{12} - 8u^{10} + 24u^8 - 32u^6 - u^5 + 18u^4 + u^3 - 3u^2 + 1)$ $(u^{66} + 5u^{65} + \dots + 3u - 1)$
c_8	$(u^{12} + 6u^{10} + \dots + 3u + 1)(u^{66} + u^{65} + \dots + 262u - 97)$
c_9	$(u^{12} + u^{11} - u^{10} + 7u^8 - 8u^7 + 7u^6 - 5u^5 + 10u^4 - 10u^3 + 7u^2 - 2u + 1)$ $(u^{66} + 5u^{64} + \dots + 2311u - 389)$
c_{10}	$(u^{12} - 8u^{10} + 24u^8 - 32u^6 + u^5 + 18u^4 - u^3 - 3u^2 + 1)$ $(u^{66} + 5u^{65} + \dots + 3u - 1)$
c_{11}	$(u^{12} - 2u^{11} + \dots + u + 1)(u^{66} + 3u^{65} + \dots - 110u + 13)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_5	$(y^{12} + 9y^{11} + \dots + 10y + 1)(y^{66} + 42y^{65} + \dots + 122865y + 14641)$
c_2	$(y^{12} + 12y^{11} + \dots + 5y + 1)(y^{66} + 49y^{65} + \dots + 143204y + 9409)$
c_3	$(y^{12} + 10y^{11} + \dots + 9y + 1)(y^{66} + 47y^{65} + \dots - 3000y + 169)$
c_4	$(y^{12} + 4y^{11} + \dots - 7y + 1)$ $(y^{66} - 19y^{65} + \dots - 13709505y + 2093803)$
c_6	$(y^{12} - 16y^{11} + \dots - 6y + 1)(y^{66} - 71y^{65} + \dots + 29y + 1)$
c_7	$(y^{12} - 16y^{11} + \dots - 6y + 1)(y^{66} - 71y^{65} + \dots + 29y + 1)$
c_8	$(y^{12} + 12y^{11} + \dots + 5y + 1)(y^{66} + 49y^{65} + \dots + 143204y + 9409)$
c_9	$(y^{12} - 3y^{11} + \dots + 10y + 1)(y^{66} + 10y^{65} + \dots + 4949885y + 151321)$
c_{10}	$(y^{12} - 16y^{11} + \dots - 6y + 1)(y^{66} - 71y^{65} + \dots + 29y + 1)$
c_{11}	$(y^{12} + 10y^{11} + \dots + 9y + 1)(y^{66} + 47y^{65} + \dots - 3000y + 169)$