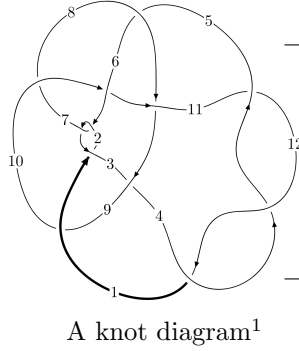
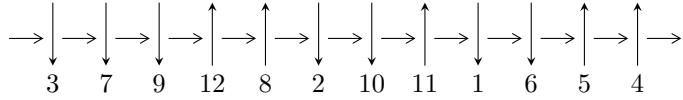


12a₀₆₀₃ (K12a₀₆₀₃)



Linearized knot diagram



Solving Sequence

$$5, 11 \xrightarrow{c_{11}} 12 \xrightarrow{c_4} 4 \xrightarrow{c_{12}} 1, 9 \xrightarrow{c_3} 3 \xrightarrow{c_1} 2 \xrightarrow{c_8} 8 \xrightarrow{c_5} 6 \xrightarrow{c_{10}} 10 \xrightarrow{c_7} 7 \rightsquigarrow c_2, c_6, c_9$$

Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -2.64474 \times 10^{364} u^{132} - 1.02887 \times 10^{365} u^{131} + \dots + 2.92376 \times 10^{364} b - 7.83824 \times 10^{364}, \\ 1.91797 \times 10^{364} u^{132} + 9.44885 \times 10^{364} u^{131} + \dots + 2.92376 \times 10^{364} a + 1.78055 \times 10^{365}, \\ u^{133} + 4u^{132} + \dots + 18u + 1 \rangle$$

$$I_2^u = \langle -2338u^{25} - 12252u^{24} + \dots + 18671b - 18146, -15486u^{25} - 29931u^{24} + \dots + 18671a + 59714, \\ u^{26} + u^{25} + \dots - 2u + 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 159 representations.

¹The image of knot diagram is generated by the software “**Draw programme**” developed by Andrew Bartholomew(<http://www.layer8.co.uk/maths/draw/index.htm#Running-draw>), where we modified some parts for our purpose(<https://github.com/CATsTAILs/LinksPainter>).

²All coefficients of polynomials are rational numbers. But the coefficients are sometimes approximated in decimal forms when there is not enough margin.

$$\text{I. } I_1^u = \langle -2.64 \times 10^{364} u^{132} - 1.03 \times 10^{365} u^{131} + \dots + 2.92 \times 10^{364} b - 7.84 \times 10^{364}, 1.92 \times 10^{364} u^{132} + 9.45 \times 10^{364} u^{131} + \dots + 2.92 \times 10^{364} a + 1.78 \times 10^{365}, u^{133} + 4u^{132} + \dots + 18u + 1 \rangle$$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.655993u^{132} - 3.23175u^{131} + \dots - 268.477u - 6.08993 \\ 0.904567u^{132} + 3.51901u^{131} + \dots + 27.3508u + 2.68088 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 2.36500u^{132} + 9.81964u^{131} + \dots + 400.736u + 24.4482 \\ 0.861748u^{132} + 3.26370u^{131} + \dots + 63.9327u + 2.76443 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} 0.500905u^{132} + 1.14522u^{131} + \dots - 19.0597u - 10.5361 \\ -0.0621254u^{132} + 0.252358u^{131} + \dots + 7.15415u - 1.03549 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -1.56056u^{132} - 6.75076u^{131} + \dots - 295.828u - 8.77081 \\ 0.904567u^{132} + 3.51901u^{131} + \dots + 27.3508u + 2.68088 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 2.44617u^{132} + 10.3270u^{131} + \dots + 319.714u + 20.7248 \\ -0.378624u^{132} - 1.55141u^{131} + \dots + 16.1274u + 0.732186 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} -1.24955u^{132} - 5.63197u^{131} + \dots - 317.747u - 10.0100 \\ 0.639277u^{132} + 2.53166u^{131} + \dots + 21.4354u + 2.42305 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -1.11577u^{132} - 4.52867u^{131} + \dots - 100.102u + 6.85622 \\ -0.267124u^{132} - 0.836064u^{131} + \dots + 47.1787u + 4.78908 \end{pmatrix}$$

(ii) Obstruction class = -1

(iii) Cusp Shapes = $-9.94811u^{132} - 38.2270u^{131} + \dots - 105.374u + 7.68191$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{133} + 52u^{132} + \dots + 48754u + 1849$
c_2, c_6	$u^{133} - 26u^{131} + \dots + 54u + 43$
c_3	$u^{133} - 2u^{132} + \dots + 11980u + 919$
c_4, c_{11}, c_{12}	$u^{133} + 4u^{132} + \dots + 18u + 1$
c_5	$u^{133} + 11u^{132} + \dots + 114108u + 20779$
c_7	$u^{133} + 12u^{132} + \dots - 10013u + 1819$
c_8	$u^{133} - 8u^{132} + \dots + 4740u + 2736$
c_9	$u^{133} + 3u^{132} + \dots + 42284u - 2231$
c_{10}	$u^{133} + u^{132} + \dots + 22010u - 1007$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{133} + 64y^{132} + \dots - 347471326y - 3418801$
c_2, c_6	$y^{133} - 52y^{132} + \dots + 48754y - 1849$
c_3	$y^{133} - 16y^{132} + \dots + 28417488y - 844561$
c_4, c_{11}, c_{12}	$y^{133} + 144y^{132} + \dots - 178y - 1$
c_5	$y^{133} + 37y^{132} + \dots - 27554143614y - 431766841$
c_7	$y^{133} + 2y^{132} + \dots + 17932229y - 3308761$
c_8	$y^{133} + 26y^{132} + \dots - 64564560y - 7485696$
c_9	$y^{133} - 25y^{132} + \dots + 651416174y - 4977361$
c_{10}	$y^{133} + 35y^{132} + \dots + 25824104y - 1014049$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.317390 + 0.951720I$		
$a = 1.48827 - 0.25479I$	$-0.13837 - 1.80283I$	0
$b = 0.757216 + 0.344540I$		
$u = -0.317390 - 0.951720I$		
$a = 1.48827 + 0.25479I$	$-0.13837 + 1.80283I$	0
$b = 0.757216 - 0.344540I$		
$u = 0.000414 + 1.006760I$		
$a = 0.907735 - 0.505915I$	$-0.85528 + 1.37756I$	0
$b = 0.454679 - 0.046619I$		
$u = 0.000414 - 1.006760I$		
$a = 0.907735 + 0.505915I$	$-0.85528 - 1.37756I$	0
$b = 0.454679 + 0.046619I$		
$u = 0.369042 + 0.904093I$		
$a = 1.49938 + 0.10474I$	$-0.32005 - 2.62744I$	0
$b = 0.699547 - 0.487167I$		
$u = 0.369042 - 0.904093I$		
$a = 1.49938 - 0.10474I$	$-0.32005 + 2.62744I$	0
$b = 0.699547 + 0.487167I$		
$u = -0.803088 + 0.636718I$		
$a = 0.484658 + 0.531000I$	$-4.78432 - 7.01607I$	0
$b = -0.775385 + 0.851791I$		
$u = -0.803088 - 0.636718I$		
$a = 0.484658 - 0.531000I$	$-4.78432 + 7.01607I$	0
$b = -0.775385 - 0.851791I$		
$u = -0.793242 + 0.649364I$		
$a = 0.316921 + 0.646051I$	$0.6941 - 14.9364I$	0
$b = -1.028850 + 0.950405I$		
$u = -0.793242 - 0.649364I$		
$a = 0.316921 - 0.646051I$	$0.6941 + 14.9364I$	0
$b = -1.028850 - 0.950405I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.793523 + 0.655020I$ $a = 0.311114 - 0.584099I$ $b = -1.019840 - 0.865635I$	$2.41217 + 8.91087I$	0
$u = 0.793523 - 0.655020I$ $a = 0.311114 + 0.584099I$ $b = -1.019840 + 0.865635I$	$2.41217 - 8.91087I$	0
$u = -0.935358 + 0.435263I$ $a = -0.330740 + 0.419531I$ $b = -0.631739 - 0.591068I$	$1.37484 + 9.33049I$	0
$u = -0.935358 - 0.435263I$ $a = -0.330740 - 0.419531I$ $b = -0.631739 + 0.591068I$	$1.37484 - 9.33049I$	0
$u = 0.956015 + 0.391472I$ $a = -0.180667 - 0.451075I$ $b = -0.595131 + 0.477995I$	$3.19901 - 3.27930I$	0
$u = 0.956015 - 0.391472I$ $a = -0.180667 + 0.451075I$ $b = -0.595131 - 0.477995I$	$3.19901 + 3.27930I$	0
$u = 0.498790 + 0.934638I$ $a = 0.322872 - 0.250760I$ $b = -1.020790 - 0.209680I$	$1.84987 + 2.34571I$	0
$u = 0.498790 - 0.934638I$ $a = 0.322872 + 0.250760I$ $b = -1.020790 + 0.209680I$	$1.84987 - 2.34571I$	0
$u = -0.789480 + 0.492341I$ $a = -0.242498 - 0.247167I$ $b = 0.227250 - 0.984213I$	$-2.11830 - 6.37096I$	0
$u = -0.789480 - 0.492341I$ $a = -0.242498 + 0.247167I$ $b = 0.227250 + 0.984213I$	$-2.11830 + 6.37096I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.932967 + 0.567128I$ $a = 0.453567 - 0.242141I$ $b = -0.685684 - 0.500427I$	$0.94295 + 3.39839I$	0
$u = 0.932967 - 0.567128I$ $a = 0.453567 + 0.242141I$ $b = -0.685684 + 0.500427I$	$0.94295 - 3.39839I$	0
$u = 0.658045 + 0.586349I$ $a = -0.036517 + 0.301429I$ $b = 0.413199 + 0.649549I$	$-0.02575 + 2.01548I$	0
$u = 0.658045 - 0.586349I$ $a = -0.036517 - 0.301429I$ $b = 0.413199 - 0.649549I$	$-0.02575 - 2.01548I$	0
$u = -0.958383 + 0.586194I$ $a = -0.189165 + 0.040884I$ $b = -0.175318 - 0.636952I$	$-4.36490 + 1.21700I$	0
$u = -0.958383 - 0.586194I$ $a = -0.189165 - 0.040884I$ $b = -0.175318 + 0.636952I$	$-4.36490 - 1.21700I$	0
$u = -0.426635 + 0.754500I$ $a = 0.265362 + 0.064534I$ $b = -1.151620 + 0.038490I$	$0.72377 + 3.99082I$	0
$u = -0.426635 - 0.754500I$ $a = 0.265362 - 0.064534I$ $b = -1.151620 - 0.038490I$	$0.72377 - 3.99082I$	0
$u = -0.672366 + 0.529127I$ $a = 0.851817 + 0.281364I$ $b = -0.266858 + 0.657749I$	$-2.44476 + 1.49394I$	0
$u = -0.672366 - 0.529127I$ $a = 0.851817 - 0.281364I$ $b = -0.266858 - 0.657749I$	$-2.44476 - 1.49394I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.407366 + 0.705544I$		
$a = 1.237480 - 0.100857I$	$-1.33061 + 1.48114I$	0
$b = 0.317154 - 0.559779I$		
$u = 0.407366 - 0.705544I$		
$a = 1.237480 + 0.100857I$	$-1.33061 - 1.48114I$	0
$b = 0.317154 + 0.559779I$		
$u = 0.106132 + 1.212180I$		
$a = 0.540451 - 0.882730I$	$-0.91739 + 1.45459I$	0
$b = 0.227641 - 0.264956I$		
$u = 0.106132 - 1.212180I$		
$a = 0.540451 + 0.882730I$	$-0.91739 - 1.45459I$	0
$b = 0.227641 + 0.264956I$		
$u = 0.649189 + 0.390265I$		
$a = -0.292317 + 0.359202I$	$-0.25396 + 2.43752I$	0
$b = 0.660502 + 0.993791I$		
$u = 0.649189 - 0.390265I$		
$a = -0.292317 - 0.359202I$	$-0.25396 - 2.43752I$	0
$b = 0.660502 - 0.993791I$		
$u = 0.506366 + 0.515867I$		
$a = -0.026354 + 1.228440I$	$2.75321 + 1.11683I$	0
$b = 1.108190 + 0.793659I$		
$u = 0.506366 - 0.515867I$		
$a = -0.026354 - 1.228440I$	$2.75321 - 1.11683I$	0
$b = 1.108190 - 0.793659I$		
$u = -0.481846 + 0.531634I$		
$a = -0.20249 - 1.40276I$	$2.44358 - 6.00898I$	0
$b = 1.09151 - 0.94036I$		
$u = -0.481846 - 0.531634I$		
$a = -0.20249 + 1.40276I$	$2.44358 + 6.00898I$	0
$b = 1.09151 + 0.94036I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.656088 + 0.255849I$ $a = 0.52898 - 1.37981I$ $b = -0.681640 + 0.041539I$	$3.76926 + 1.77877I$	0
$u = 0.656088 - 0.255849I$ $a = 0.52898 + 1.37981I$ $b = -0.681640 - 0.041539I$	$3.76926 - 1.77877I$	0
$u = 0.024261 + 1.300360I$ $a = 0.80241 + 1.25166I$ $b = 0.392384 + 0.629169I$	$-1.84210 + 3.58791I$	0
$u = 0.024261 - 1.300360I$ $a = 0.80241 - 1.25166I$ $b = 0.392384 - 0.629169I$	$-1.84210 - 3.58791I$	0
$u = 0.634032 + 0.204038I$ $a = -0.266567 + 0.023162I$ $b = 0.96643 + 1.09114I$	$1.81642 + 6.34178I$	0
$u = 0.634032 - 0.204038I$ $a = -0.266567 - 0.023162I$ $b = 0.96643 - 1.09114I$	$1.81642 - 6.34178I$	0
$u = -0.591817 + 0.305159I$ $a = 0.47167 + 1.82209I$ $b = -0.722007 + 0.064641I$	$2.08204 - 7.64852I$	0
$u = -0.591817 - 0.305159I$ $a = 0.47167 - 1.82209I$ $b = -0.722007 - 0.064641I$	$2.08204 + 7.64852I$	0
$u = -0.115208 + 1.393630I$ $a = 0.36616 + 1.69593I$ $b = -0.175512 + 0.385658I$	$-7.28259 - 1.99857I$	0
$u = -0.115208 - 1.393630I$ $a = 0.36616 - 1.69593I$ $b = -0.175512 - 0.385658I$	$-7.28259 + 1.99857I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.576843 + 0.161115I$		
$a = -0.352819 + 0.183120I$	$2.25476 - 1.57690I$	0
$b = 1.02384 - 0.98527I$		
$u = -0.576843 - 0.161115I$		
$a = -0.352819 - 0.183120I$	$2.25476 + 1.57690I$	0
$b = 1.02384 + 0.98527I$		
$u = 0.157819 + 1.404700I$		
$a = 0.38426 + 2.21112I$	$-3.28021 + 9.03412I$	0
$b = 1.16806 + 1.82923I$		
$u = 0.157819 - 1.404700I$		
$a = 0.38426 - 2.21112I$	$-3.28021 - 9.03412I$	0
$b = 1.16806 - 1.82923I$		
$u = -0.129646 + 1.407920I$		
$a = 0.52271 - 2.11793I$	$-2.74273 - 3.87928I$	0
$b = 1.31501 - 1.72724I$		
$u = -0.129646 - 1.407920I$		
$a = 0.52271 + 2.11793I$	$-2.74273 + 3.87928I$	0
$b = 1.31501 + 1.72724I$		
$u = -0.00898 + 1.41834I$		
$a = 0.869029 - 0.280038I$	$-1.87843 - 2.86423I$	0
$b = 1.89525 - 0.21062I$		
$u = -0.00898 - 1.41834I$		
$a = 0.869029 + 0.280038I$	$-1.87843 + 2.86423I$	0
$b = 1.89525 + 0.21062I$		
$u = 0.425893 + 0.388958I$		
$a = 0.749508 + 0.920587I$	$3.04373 + 2.24122I$	0
$b = 1.090570 - 0.092383I$		
$u = 0.425893 - 0.388958I$		
$a = 0.749508 - 0.920587I$	$3.04373 - 2.24122I$	0
$b = 1.090570 + 0.092383I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.17101 + 1.41706I$ $a = -0.19054 - 1.45824I$ $b = -0.198228 - 0.320181I$	$-1.56608 + 4.61751I$	0
$u = 0.17101 - 1.41706I$ $a = -0.19054 + 1.45824I$ $b = -0.198228 + 0.320181I$	$-1.56608 - 4.61751I$	0
$u = -0.16050 + 1.44536I$ $a = -0.35715 + 1.61866I$ $b = -0.235486 + 0.363547I$	$-3.57964 - 10.24340I$	0
$u = -0.16050 - 1.44536I$ $a = -0.35715 - 1.61866I$ $b = -0.235486 - 0.363547I$	$-3.57964 + 10.24340I$	0
$u = -0.168418 + 0.494494I$ $a = 0.674329 - 0.621285I$ $b = -0.789301 - 0.837924I$	$-4.60689 - 1.43800I$	$-13.8922 + 4.9797I$
$u = -0.168418 - 0.494494I$ $a = 0.674329 + 0.621285I$ $b = -0.789301 + 0.837924I$	$-4.60689 + 1.43800I$	$-13.8922 - 4.9797I$
$u = -0.06341 + 1.47689I$ $a = 0.08778 - 1.68631I$ $b = 1.04337 - 1.10273I$	$-5.88104 - 3.96728I$	0
$u = -0.06341 - 1.47689I$ $a = 0.08778 + 1.68631I$ $b = 1.04337 + 1.10273I$	$-5.88104 + 3.96728I$	0
$u = 0.01989 + 1.48051I$ $a = -0.49414 + 1.42885I$ $b = 0.790106 + 0.712369I$	$-9.73015 + 0.95948I$	0
$u = 0.01989 - 1.48051I$ $a = -0.49414 - 1.42885I$ $b = 0.790106 - 0.712369I$	$-9.73015 - 0.95948I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.043249 + 0.511103I$ $a = 1.214090 + 0.126404I$ $b = 0.109302 + 0.541830I$	$-0.583972 + 1.101550I$	$-4.23096 - 5.60583I$
$u = -0.043249 - 0.511103I$ $a = 1.214090 - 0.126404I$ $b = 0.109302 - 0.541830I$	$-0.583972 - 1.101550I$	$-4.23096 + 5.60583I$
$u = 0.133560 + 0.491181I$ $a = -1.90389 + 2.49784I$ $b = 0.372651 + 1.063630I$	$-1.26012 + 7.38742I$	$-9.26674 - 9.57442I$
$u = 0.133560 - 0.491181I$ $a = -1.90389 - 2.49784I$ $b = 0.372651 - 1.063630I$	$-1.26012 - 7.38742I$	$-9.26674 + 9.57442I$
$u = 0.04176 + 1.49067I$ $a = -0.47373 + 2.05790I$ $b = -0.89918 + 1.88657I$	$-5.92601 + 2.68412I$	0
$u = 0.04176 - 1.49067I$ $a = -0.47373 - 2.05790I$ $b = -0.89918 - 1.88657I$	$-5.92601 - 2.68412I$	0
$u = -0.04847 + 1.49413I$ $a = -0.78279 - 2.21960I$ $b = -1.18996 - 2.09454I$	$-7.06887 - 8.05152I$	0
$u = -0.04847 - 1.49413I$ $a = -0.78279 + 2.21960I$ $b = -1.18996 + 2.09454I$	$-7.06887 + 8.05152I$	0
$u = -0.285640 + 0.411254I$ $a = -1.67724 - 1.34413I$ $b = 0.674173 - 0.951931I$	$0.21801 - 2.84449I$	$-6.69111 + 5.42023I$
$u = -0.285640 - 0.411254I$ $a = -1.67724 + 1.34413I$ $b = 0.674173 + 0.951931I$	$0.21801 + 2.84449I$	$-6.69111 - 5.42023I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.00411 + 1.49940I$ $a = -0.034013 + 1.247090I$ $b = -0.654002 + 1.001360I$	$-7.13066 + 0.99619I$	0
$u = -0.00411 - 1.49940I$ $a = -0.034013 - 1.247090I$ $b = -0.654002 - 1.001360I$	$-7.13066 - 0.99619I$	0
$u = -0.493767$ $a = 2.39133$ $b = -0.433102$	-2.78828	7.19090
$u = 0.18593 + 1.49544I$ $a = 0.23693 + 1.86590I$ $b = 0.87674 + 1.52250I$	$-6.47122 + 5.38417I$	0
$u = 0.18593 - 1.49544I$ $a = 0.23693 - 1.86590I$ $b = 0.87674 - 1.52250I$	$-6.47122 - 5.38417I$	0
$u = -0.302379 + 0.376139I$ $a = -1.71287 - 1.05933I$ $b = 0.703159 - 0.906006I$	$0.21546 - 2.84638I$	$-6.97104 + 4.61346I$
$u = -0.302379 - 0.376139I$ $a = -1.71287 + 1.05933I$ $b = 0.703159 + 0.906006I$	$0.21546 + 2.84638I$	$-6.97104 - 4.61346I$
$u = -0.04149 + 1.51691I$ $a = -0.96225 - 1.36156I$ $b = -1.48240 - 1.28111I$	$-11.33610 - 2.16379I$	0
$u = -0.04149 - 1.51691I$ $a = -0.96225 + 1.36156I$ $b = -1.48240 + 1.28111I$	$-11.33610 + 2.16379I$	0
$u = 0.05434 + 1.51815I$ $a = -0.16809 + 1.99980I$ $b = 0.731255 + 1.191720I$	$-8.00857 + 8.15289I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.05434 - 1.51815I$ $a = -0.16809 - 1.99980I$ $b = 0.731255 - 1.191720I$	$-8.00857 - 8.15289I$	0
$u = -0.373708 + 0.296677I$ $a = 0.88807 - 1.11270I$ $b = 1.096980 + 0.324651I$	$2.95451 + 2.86833I$	$3.36195 - 2.49580I$
$u = -0.373708 - 0.296677I$ $a = 0.88807 + 1.11270I$ $b = 1.096980 - 0.324651I$	$2.95451 - 2.86833I$	$3.36195 + 2.49580I$
$u = -0.10664 + 1.51935I$ $a = 0.22505 - 2.09878I$ $b = 0.90901 - 1.42641I$	$-6.35860 - 4.41080I$	0
$u = -0.10664 - 1.51935I$ $a = 0.22505 + 2.09878I$ $b = 0.90901 + 1.42641I$	$-6.35860 + 4.41080I$	0
$u = 0.05280 + 1.53825I$ $a = 0.402096 - 0.887123I$ $b = -0.428055 - 0.647065I$	$-8.71760 + 2.74837I$	0
$u = 0.05280 - 1.53825I$ $a = 0.402096 + 0.887123I$ $b = -0.428055 + 0.647065I$	$-8.71760 - 2.74837I$	0
$u = 0.14504 + 1.53284I$ $a = 0.64806 + 2.06392I$ $b = 1.03840 + 1.49297I$	$-4.07088 + 3.44664I$	0
$u = 0.14504 - 1.53284I$ $a = 0.64806 - 2.06392I$ $b = 1.03840 - 1.49297I$	$-4.07088 - 3.44664I$	0
$u = -0.14024 + 1.53676I$ $a = 0.56247 - 2.18445I$ $b = 1.00171 - 1.53117I$	$-4.45856 - 8.25061I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.14024 - 1.53676I$ $a = 0.56247 + 2.18445I$ $b = 1.00171 + 1.53117I$	$-4.45856 + 8.25061I$	0
$u = -0.27255 + 1.51955I$ $a = 0.195877 + 1.185480I$ $b = -0.840322 + 0.828531I$	$-8.98422 - 2.06627I$	0
$u = -0.27255 - 1.51955I$ $a = 0.195877 - 1.185480I$ $b = -0.840322 - 0.828531I$	$-8.98422 + 2.06627I$	0
$u = -0.28033 + 1.53573I$ $a = -0.26383 - 1.52176I$ $b = 0.40843 - 1.42778I$	$-8.75486 - 10.30910I$	0
$u = -0.28033 - 1.53573I$ $a = -0.26383 + 1.52176I$ $b = 0.40843 + 1.42778I$	$-8.75486 + 10.30910I$	0
$u = 0.24337 + 1.54346I$ $a = -0.01182 + 1.50878I$ $b = 0.59140 + 1.35558I$	$-6.98088 + 5.42866I$	0
$u = 0.24337 - 1.54346I$ $a = -0.01182 - 1.50878I$ $b = 0.59140 - 1.35558I$	$-6.98088 - 5.42866I$	0
$u = 0.01178 + 1.58913I$ $a = 0.641897 - 0.168948I$ $b = -0.271936 - 0.128015I$	$-8.82523 - 1.97090I$	0
$u = 0.01178 - 1.58913I$ $a = 0.641897 + 0.168948I$ $b = -0.271936 + 0.128015I$	$-8.82523 + 1.97090I$	0
$u = -0.02508 + 1.59144I$ $a = -1.009020 - 0.130899I$ $b = -1.67399 - 0.14333I$	$-7.47157 + 2.79606I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.02508 - 1.59144I$ $a = -1.009020 + 0.130899I$ $b = -1.67399 + 0.14333I$	$-7.47157 - 2.79606I$	0
$u = 0.29032 + 1.56776I$ $a = -0.113460 - 1.241150I$ $b = -1.09373 - 0.90987I$	$-6.07812 + 7.75295I$	0
$u = 0.29032 - 1.56776I$ $a = -0.113460 + 1.241150I$ $b = -1.09373 + 0.90987I$	$-6.07812 - 7.75295I$	0
$u = -0.26636 + 1.57594I$ $a = -0.09034 + 1.56042I$ $b = -1.05795 + 1.17553I$	$-12.0378 - 10.9576I$	0
$u = -0.26636 - 1.57594I$ $a = -0.09034 - 1.56042I$ $b = -1.05795 - 1.17553I$	$-12.0378 + 10.9576I$	0
$u = 0.26841 + 1.58317I$ $a = -0.32622 - 1.64413I$ $b = -1.25343 - 1.25103I$	$-4.92983 + 12.86050I$	0
$u = 0.26841 - 1.58317I$ $a = -0.32622 + 1.64413I$ $b = -1.25343 + 1.25103I$	$-4.92983 - 12.86050I$	0
$u = -0.26752 + 1.58339I$ $a = -0.30850 + 1.73916I$ $b = -1.23745 + 1.32967I$	$-6.6376 - 18.8784I$	0
$u = -0.26752 - 1.58339I$ $a = -0.30850 - 1.73916I$ $b = -1.23745 - 1.32967I$	$-6.6376 + 18.8784I$	0
$u = 0.079914 + 0.385929I$ $a = 1.34385 + 0.96840I$ $b = -0.197854 + 1.399100I$	$0.38074 + 2.13295I$	$-8.06531 - 3.36010I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.079914 - 0.385929I$ $a = 1.34385 - 0.96840I$ $b = -0.197854 - 1.399100I$	$0.38074 - 2.13295I$	$-8.06531 + 3.36010I$
$u = -0.124602 + 0.372020I$ $a = 1.08454 - 1.22656I$ $b = -0.51124 - 1.57855I$	$-0.76549 - 7.36979I$	$-11.6376 + 9.9079I$
$u = -0.124602 - 0.372020I$ $a = 1.08454 + 1.22656I$ $b = -0.51124 + 1.57855I$	$-0.76549 + 7.36979I$	$-11.6376 - 9.9079I$
$u = -0.28126 + 1.60247I$ $a = -0.166117 - 1.072350I$ $b = 0.376756 - 1.067930I$	$-11.73370 - 3.25560I$	0
$u = -0.28126 - 1.60247I$ $a = -0.166117 + 1.072350I$ $b = 0.376756 + 1.067930I$	$-11.73370 + 3.25560I$	0
$u = 0.020949 + 0.285794I$ $a = -4.58206 + 3.66281I$ $b = 0.263329 + 0.553117I$	$-3.70855 + 0.73359I$	$-16.7166 - 9.5133I$
$u = 0.020949 - 0.285794I$ $a = -4.58206 - 3.66281I$ $b = 0.263329 - 0.553117I$	$-3.70855 - 0.73359I$	$-16.7166 + 9.5133I$
$u = 0.12107 + 1.71586I$ $a = 0.578766 + 0.472770I$ $b = 0.878169 + 0.444612I$	$-4.52826 + 3.17528I$	0
$u = 0.12107 - 1.71586I$ $a = 0.578766 - 0.472770I$ $b = 0.878169 - 0.444612I$	$-4.52826 - 3.17528I$	0
$u = -0.0497810 + 0.0929399I$ $a = 7.44487 - 4.20522I$ $b = 1.280570 + 0.208471I$	$2.95956 + 2.70189I$	$5.86567 - 2.43133I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.0497810 - 0.0929399I$	$2.95956 - 2.70189I$	$5.86567 + 2.43133I$
$a = 7.44487 + 4.20522I$		
$b = 1.280570 - 0.208471I$		
$u = -0.46323 + 1.87823I$	$-5.20296 + 3.54902I$	0
$a = -0.050476 - 0.185973I$		
$b = 0.207519 - 0.324822I$		
$u = -0.46323 - 1.87823I$	$-5.20296 - 3.54902I$	0
$a = -0.050476 + 0.185973I$		
$b = 0.207519 + 0.324822I$		

$$\text{II. } I_2^u = \langle -2338u^{25} - 12252u^{24} + \dots + 18671b - 18146, -15486u^{25} - 29931u^{24} + \dots + 18671a + 59714, u^{26} + u^{25} + \dots - 2u + 1 \rangle$$

(i) Arc colorings

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

$$a_{11} = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_{12} = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

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

$$a_1 = \begin{pmatrix} u^2 + 1 \\ -u^4 - 2u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 0.829415u^{25} + 1.60307u^{24} + \dots - 0.740882u - 3.19822 \\ 0.125221u^{25} + 0.656205u^{24} + \dots - 0.977023u + 0.971882 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -2.09276u^{25} - 1.79921u^{24} + \dots - 3.64747u + 3.71544 \\ 0.105458u^{25} + 0.228429u^{24} + \dots - 1.03240u - 0.421884 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -1.49285u^{25} - 1.58101u^{24} + \dots - 3.25639u + 2.81726 \\ 0.165979u^{25} - 0.374859u^{24} + \dots + 1.26185u - 2.57919 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 0.704194u^{25} + 0.946869u^{24} + \dots + 0.236142u - 4.17010 \\ 0.125221u^{25} + 0.656205u^{24} + \dots - 0.977023u + 0.971882 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} -1.21456u^{25} - 2.18339u^{24} + \dots + 2.68604u + 2.67093 \\ -0.757324u^{25} - 0.663275u^{24} + \dots - 0.761716u + 0.295806 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} 0.704194u^{25} + 0.946869u^{24} + \dots + 0.236142u - 3.17010 \\ 0.0311713u^{25} + 0.129988u^{24} + \dots + 0.241819u + 0.214557 \end{pmatrix}$$

$$a_7 = \begin{pmatrix} -0.170585u^{25} - 0.396926u^{24} + \dots + 1.25912u - 1.19822 \\ 0.253923u^{25} + 0.198061u^{24} + \dots - 0.591988u - 1.31750 \end{pmatrix}$$

(ii) Obstruction class = 1

$$\text{(iii) Cusp Shapes} = \frac{13065}{18671}u^{25} - \frac{93057}{18671}u^{24} + \dots + \frac{33119}{18671}u - \frac{46928}{18671}$$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{26} - 11u^{25} + \dots - 8u + 1$
c_2	$u^{26} - u^{25} + \dots - 4u^2 + 1$
c_3	$u^{26} + u^{25} + \dots + 6u + 1$
c_4	$u^{26} - u^{25} + \dots + 2u + 1$
c_5	$u^{26} - 2u^{25} + \dots + 8u^2 + 1$
c_6	$u^{26} + u^{25} + \dots - 4u^2 + 1$
c_7	$u^{26} - 13u^{25} + \dots - u + 1$
c_8	$u^{26} + 13u^{25} + \dots + 4u + 1$
c_9	$u^{26} - 2u^{24} + \dots + 6u + 1$
c_{10}	$u^{26} + 8u^{24} + \dots - 2u + 1$
c_{11}, c_{12}	$u^{26} + u^{25} + \dots - 2u + 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{26} + 13y^{25} + \cdots + 12y + 1$
c_2, c_6	$y^{26} - 11y^{25} + \cdots - 8y + 1$
c_3	$y^{26} - 7y^{25} + \cdots - 2y + 1$
c_4, c_{11}, c_{12}	$y^{26} + 33y^{25} + \cdots - 8y + 1$
c_5	$y^{26} + 6y^{25} + \cdots + 16y + 1$
c_7	$y^{26} + 11y^{25} + \cdots - 3y + 1$
c_8	$y^{26} + 11y^{25} + \cdots + 8y + 1$
c_9	$y^{26} - 4y^{25} + \cdots + 4y + 1$
c_{10}	$y^{26} + 16y^{25} + \cdots + 6y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.306726 + 1.016270I$		
$a = 1.009030 + 0.212230I$	$-1.165190 - 0.538608I$	$-7.35887 - 3.73390I$
$b = 0.525737 + 0.576345I$		
$u = -0.306726 - 1.016270I$		
$a = 1.009030 - 0.212230I$	$-1.165190 + 0.538608I$	$-7.35887 + 3.73390I$
$b = 0.525737 - 0.576345I$		
$u = -0.034817 + 1.078400I$		
$a = 1.81430 + 0.13995I$	$0.86339 + 2.47360I$	$2.30818 - 4.00300I$
$b = 1.303250 + 0.184179I$		
$u = -0.034817 - 1.078400I$		
$a = 1.81430 - 0.13995I$	$0.86339 - 2.47360I$	$2.30818 + 4.00300I$
$b = 1.303250 - 0.184179I$		
$u = -0.711496 + 0.464994I$		
$a = -0.527123 - 0.262693I$	$1.32513 - 3.20472I$	$3.11109 + 4.54506I$
$b = 0.777504 - 0.585568I$		
$u = -0.711496 - 0.464994I$		
$a = -0.527123 + 0.262693I$	$1.32513 + 3.20472I$	$3.11109 - 4.54506I$
$b = 0.777504 + 0.585568I$		
$u = -0.158130 + 0.779991I$		
$a = -0.305083 - 0.215574I$	$1.99246 - 3.04733I$	$-0.75776 + 5.91791I$
$b = 1.249920 - 0.233233I$		
$u = -0.158130 - 0.779991I$		
$a = -0.305083 + 0.215574I$	$1.99246 + 3.04733I$	$-0.75776 - 5.91791I$
$b = 1.249920 + 0.233233I$		
$u = 0.15454 + 1.42846I$		
$a = -0.40655 + 1.69689I$	$-7.82210 + 2.49671I$	$-8.54154 - 6.19463I$
$b = 0.529960 + 0.825495I$		
$u = 0.15454 - 1.42846I$		
$a = -0.40655 - 1.69689I$	$-7.82210 - 2.49671I$	$-8.54154 + 6.19463I$
$b = 0.529960 - 0.825495I$		

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.11438 + 1.48378I$ $a = -0.06466 + 2.44794I$ $b = 0.35186 + 1.84021I$	$-5.73465 + 9.02428I$	$-6.51420 - 9.56426I$
$u = 0.11438 - 1.48378I$ $a = -0.06466 - 2.44794I$ $b = 0.35186 - 1.84021I$	$-5.73465 - 9.02428I$	$-6.51420 + 9.56426I$
$u = -0.11780 + 1.49817I$ $a = 0.30612 - 2.40096I$ $b = 0.79427 - 1.88854I$	$-4.78825 - 4.25777I$	$-4.81827 + 4.73004I$
$u = -0.11780 - 1.49817I$ $a = 0.30612 + 2.40096I$ $b = 0.79427 + 1.88854I$	$-4.78825 + 4.25777I$	$-4.81827 - 4.73004I$
$u = -0.422673 + 0.243766I$ $a = -1.113300 - 0.731265I$ $b = 0.578656 - 1.206060I$	$1.22560 - 2.44010I$	$1.93579 + 5.46846I$
$u = -0.422673 - 0.243766I$ $a = -1.113300 + 0.731265I$ $b = 0.578656 + 1.206060I$	$1.22560 + 2.44010I$	$1.93579 - 5.46846I$
$u = -0.16092 + 1.52352I$ $a = 0.46164 - 1.66303I$ $b = 1.17104 - 1.22369I$	$-5.32973 - 5.96540I$	$-3.53463 + 6.55412I$
$u = -0.16092 - 1.52352I$ $a = 0.46164 + 1.66303I$ $b = 1.17104 + 1.22369I$	$-5.32973 + 5.96540I$	$-3.53463 - 6.55412I$
$u = 0.03992 + 1.53952I$ $a = 0.254043 + 0.361221I$ $b = -0.618333 + 0.066820I$	$-9.92387 + 0.69803I$	$-11.72683 - 0.12412I$
$u = 0.03992 - 1.53952I$ $a = 0.254043 - 0.361221I$ $b = -0.618333 - 0.066820I$	$-9.92387 - 0.69803I$	$-11.72683 + 0.12412I$

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.369644 + 0.227091I$ $a = -0.57419 + 2.52797I$ $b = 0.084942 - 0.295992I$	$-3.33177 - 0.48320I$	$-3.06570 - 0.11585I$
$u = 0.369644 - 0.227091I$ $a = -0.57419 - 2.52797I$ $b = 0.084942 + 0.295992I$	$-3.33177 + 0.48320I$	$-3.06570 + 0.11585I$
$u = 0.404112 + 0.132908I$ $a = -1.77340 + 0.54695I$ $b = 0.099371 + 1.192210I$	$-0.03602 + 7.28389I$	$0.19876 - 8.70223I$
$u = 0.404112 - 0.132908I$ $a = -1.77340 - 0.54695I$ $b = 0.099371 - 1.192210I$	$-0.03602 - 7.28389I$	$0.19876 + 8.70223I$
$u = 0.32997 + 1.86158I$ $a = -0.0808278 - 0.0704723I$ $b = -0.348193 - 0.202080I$	$-5.10848 - 3.59449I$	$16.2640 + 25.5553I$
$u = 0.32997 - 1.86158I$ $a = -0.0808278 + 0.0704723I$ $b = -0.348193 + 0.202080I$	$-5.10848 + 3.59449I$	$16.2640 - 25.5553I$

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$(u^{26} - 11u^{25} + \dots - 8u + 1)(u^{133} + 52u^{132} + \dots + 48754u + 1849)$
c_2	$(u^{26} - u^{25} + \dots - 4u^2 + 1)(u^{133} - 26u^{131} + \dots + 54u + 43)$
c_3	$(u^{26} + u^{25} + \dots + 6u + 1)(u^{133} - 2u^{132} + \dots + 11980u + 919)$
c_4	$(u^{26} - u^{25} + \dots + 2u + 1)(u^{133} + 4u^{132} + \dots + 18u + 1)$
c_5	$(u^{26} - 2u^{25} + \dots + 8u^2 + 1)(u^{133} + 11u^{132} + \dots + 114108u + 20779)$
c_6	$(u^{26} + u^{25} + \dots - 4u^2 + 1)(u^{133} - 26u^{131} + \dots + 54u + 43)$
c_7	$(u^{26} - 13u^{25} + \dots - u + 1)(u^{133} + 12u^{132} + \dots - 10013u + 1819)$
c_8	$(u^{26} + 13u^{25} + \dots + 4u + 1)(u^{133} - 8u^{132} + \dots + 4740u + 2736)$
c_9	$(u^{26} - 2u^{24} + \dots + 6u + 1)(u^{133} + 3u^{132} + \dots + 42284u - 2231)$
c_{10}	$(u^{26} + 8u^{24} + \dots - 2u + 1)(u^{133} + u^{132} + \dots + 22010u - 1007)$
c_{11}, c_{12}	$(u^{26} + u^{25} + \dots - 2u + 1)(u^{133} + 4u^{132} + \dots + 18u + 1)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$(y^{26} + 13y^{25} + \dots + 12y + 1)$ $\cdot (y^{133} + 64y^{132} + \dots - 347471326y - 3418801)$
c_2, c_6	$(y^{26} - 11y^{25} + \dots - 8y + 1)(y^{133} - 52y^{132} + \dots + 48754y - 1849)$
c_3	$(y^{26} - 7y^{25} + \dots - 2y + 1)$ $\cdot (y^{133} - 16y^{132} + \dots + 28417488y - 844561)$
c_4, c_{11}, c_{12}	$(y^{26} + 33y^{25} + \dots - 8y + 1)(y^{133} + 144y^{132} + \dots - 178y - 1)$
c_5	$(y^{26} + 6y^{25} + \dots + 16y + 1)$ $\cdot (y^{133} + 37y^{132} + \dots - 27554143614y - 431766841)$
c_7	$(y^{26} + 11y^{25} + \dots - 3y + 1)$ $\cdot (y^{133} + 2y^{132} + \dots + 17932229y - 3308761)$
c_8	$(y^{26} + 11y^{25} + \dots + 8y + 1)$ $\cdot (y^{133} + 26y^{132} + \dots - 64564560y - 7485696)$
c_9	$(y^{26} - 4y^{25} + \dots + 4y + 1)$ $\cdot (y^{133} - 25y^{132} + \dots + 651416174y - 4977361)$
c_{10}	$(y^{26} + 16y^{25} + \dots + 6y + 1)$ $\cdot (y^{133} + 35y^{132} + \dots + 25824104y - 1014049)$