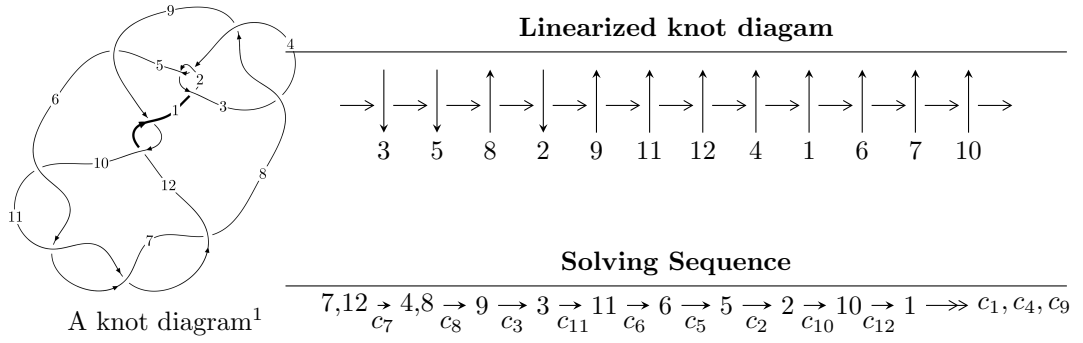


12a₀₀₈₅ (K12a₀₀₈₅)



Ideals for irreducible components² of X_{par}

$$I_1^u = \langle -u^{77} + 41u^{75} + \dots + 3u^2 + b, u^{76} - 41u^{74} + \dots + a + 1, u^{78} - 2u^{77} + \dots + u + 1 \rangle$$

$$I_2^u = \langle -u^5 + 2u^3 - u^2 + b + 1, u^5 - 3u^3 + u^2 + a + 2u - 2, u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1 \rangle$$

* 2 irreducible components of $\dim_{\mathbb{C}} = 0$, with total 84 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.

$$I_1^u = \langle -u^{77} + 41u^{75} + \dots + 3u^2 + b, u^{76} - 41u^{74} + \dots + a + 1, u^{78} - 2u^{77} + \dots + u + 1 \rangle \quad \mathbf{I.}$$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^{76} + 41u^{74} + \dots + u - 1 \\ u^{77} - 41u^{75} + \dots - 3u^3 - 3u^2 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} u^{11} - 6u^9 + 12u^7 - 8u^5 + u^3 - 2u \\ -u^{11} + 5u^9 - 8u^7 + 5u^5 - 3u^3 + u \end{pmatrix}$$

$$a_3 = \begin{pmatrix} u^{77} - u^{76} + \dots + 8u^2 - 2 \\ -2u^{77} + 2u^{76} + \dots + 3u + 2 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} u^{20} - 11u^{18} + \dots - 3u^2 + 1 \\ -u^{20} + 10u^{18} + \dots - 5u^4 + 2u^2 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} u^{77} - u^{76} + \dots + u - 1 \\ -u^{77} + u^{76} + \dots + 2u + 1 \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$

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

(ii) Obstruction class = -1

(iii) Cusp Shapes = $8u^{77} - 9u^{76} + \dots - 18u + 6$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1	$u^{78} + 37u^{77} + \dots + 114u + 1$
c_2, c_4	$u^{78} - 7u^{77} + \dots - 14u + 1$
c_3, c_8	$u^{78} + u^{77} + \dots - 800u^2 + 64$
c_5	$u^{78} - 2u^{77} + \dots - 14229u + 4721$
c_6, c_7, c_{10} c_{11}	$u^{78} + 2u^{77} + \dots - u + 1$
c_9, c_{12}	$u^{78} + 14u^{77} + \dots + 2121u + 207$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1	$y^{78} + 15y^{77} + \dots - 9330y + 1$
c_2, c_4	$y^{78} - 37y^{77} + \dots - 114y + 1$
c_3, c_8	$y^{78} - 39y^{77} + \dots - 102400y + 4096$
c_5	$y^{78} - 14y^{77} + \dots - 388528493y + 22287841$
c_6, c_7, c_{10} c_{11}	$y^{78} - 86y^{77} + \dots - y + 1$
c_9, c_{12}	$y^{78} + 46y^{77} + \dots + 505791y + 42849$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.599318 + 0.584746I$		
$a = -1.27127 - 2.26281I$	$-0.78175 - 12.54030I$	$6.09746 + 10.28095I$
$b = 0.406911 - 0.172691I$		
$u = -0.599318 - 0.584746I$		
$a = -1.27127 + 2.26281I$	$-0.78175 + 12.54030I$	$6.09746 - 10.28095I$
$b = 0.406911 + 0.172691I$		
$u = -0.599850 + 0.564094I$		
$a = 1.27636 + 2.11108I$	$1.55983 - 6.97653I$	$9.24019 + 6.64171I$
$b = -0.278346 + 0.277845I$		
$u = -0.599850 - 0.564094I$		
$a = 1.27636 - 2.11108I$	$1.55983 + 6.97653I$	$9.24019 - 6.64171I$
$b = -0.278346 - 0.277845I$		
$u = 0.802841 + 0.168457I$		
$a = -2.26912 + 0.63093I$	$3.97087 + 7.20217I$	$11.97302 - 7.33202I$
$b = 0.357877 - 0.320430I$		
$u = 0.802841 - 0.168457I$		
$a = -2.26912 - 0.63093I$	$3.97087 - 7.20217I$	$11.97302 + 7.33202I$
$b = 0.357877 + 0.320430I$		
$u = 0.805439 + 0.096765I$		
$a = 2.36172 - 0.39872I$	$5.68267 + 1.74998I$	$15.1419 - 1.8440I$
$b = -0.359916 + 0.190669I$		
$u = 0.805439 - 0.096765I$		
$a = 2.36172 + 0.39872I$	$5.68267 - 1.74998I$	$15.1419 + 1.8440I$
$b = -0.359916 - 0.190669I$		
$u = 0.576717 + 0.560895I$		
$a = 1.345380 - 0.149355I$	$-3.14364 + 6.35997I$	$4.39196 - 7.72214I$
$b = -0.580995 + 0.149181I$		
$u = 0.576717 - 0.560895I$		
$a = 1.345380 + 0.149355I$	$-3.14364 - 6.35997I$	$4.39196 + 7.72214I$
$b = -0.580995 - 0.149181I$		

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.520959 + 0.606760I$ $a = 0.872173 + 0.421611I$ $b = -0.423627 - 0.168563I$	$-4.39476 + 0.68401I$	$5.05755 + 1.70512I$
$u = 0.520959 - 0.606760I$ $a = 0.872173 - 0.421611I$ $b = -0.423627 + 0.168563I$	$-4.39476 - 0.68401I$	$5.05755 - 1.70512I$
$u = -0.558404 + 0.553380I$ $a = -1.70602 - 1.99005I$ $b = 0.351192 - 0.673255I$	$-4.00256 - 3.82936I$	$4.97815 + 7.00642I$
$u = -0.558404 - 0.553380I$ $a = -1.70602 + 1.99005I$ $b = 0.351192 + 0.673255I$	$-4.00256 + 3.82936I$	$4.97815 - 7.00642I$
$u = -0.616947 + 0.471605I$ $a = 0.92409 + 1.52711I$ $b = 0.200273 + 0.380587I$	$3.37693 - 3.48998I$	$11.29099 + 6.45217I$
$u = -0.616947 - 0.471605I$ $a = 0.92409 - 1.52711I$ $b = 0.200273 - 0.380587I$	$3.37693 + 3.48998I$	$11.29099 - 6.45217I$
$u = 0.463830 + 0.615489I$ $a = -0.400498 - 0.952066I$ $b = 0.193565 + 0.455914I$	$-4.56309 + 3.47022I$	$4.07696 - 8.07073I$
$u = 0.463830 - 0.615489I$ $a = -0.400498 + 0.952066I$ $b = 0.193565 - 0.455914I$	$-4.56309 - 3.47022I$	$4.07696 + 8.07073I$
$u = -0.640817 + 0.405593I$ $a = -0.62536 - 1.32558I$ $b = -0.339137 - 0.372642I$	$2.45756 + 1.82034I$	$10.30646 + 0.66101I$
$u = -0.640817 - 0.405593I$ $a = -0.62536 + 1.32558I$ $b = -0.339137 + 0.372642I$	$2.45756 - 1.82034I$	$10.30646 - 0.66101I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.541710 + 0.519985I$ $a = -1.108600 + 0.518660I$ $b = 0.443108 - 0.259777I$	$-1.72128 + 2.09820I$	$6.19910 - 2.97697I$
$u = 0.541710 - 0.519985I$ $a = -1.108600 - 0.518660I$ $b = 0.443108 + 0.259777I$	$-1.72128 - 2.09820I$	$6.19910 + 2.97697I$
$u = -0.364533 + 0.621473I$ $a = -0.308159 - 0.767887I$ $b = 1.44780 + 0.32955I$	$-1.47143 + 8.43896I$	$4.23505 - 4.36846I$
$u = -0.364533 - 0.621473I$ $a = -0.308159 + 0.767887I$ $b = 1.44780 - 0.32955I$	$-1.47143 - 8.43896I$	$4.23505 + 4.36846I$
$u = -0.710687 + 0.078003I$ $a = -0.060076 - 0.763572I$ $b = -0.130706 - 0.534050I$	$0.94742 - 1.90115I$	$11.49371 + 4.32216I$
$u = -0.710687 - 0.078003I$ $a = -0.060076 + 0.763572I$ $b = -0.130706 + 0.534050I$	$0.94742 + 1.90115I$	$11.49371 - 4.32216I$
$u = -0.408883 + 0.562647I$ $a = 0.668680 - 0.785887I$ $b = 1.29216 + 0.60980I$	$-4.44211 - 0.01380I$	$2.92184 - 0.24930I$
$u = -0.408883 - 0.562647I$ $a = 0.668680 + 0.785887I$ $b = 1.29216 - 0.60980I$	$-4.44211 + 0.01380I$	$2.92184 + 0.24930I$
$u = 0.383552 + 0.577713I$ $a = 0.12013 - 1.41029I$ $b = -0.127003 + 0.649722I$	$-3.70836 - 2.45187I$	$2.28902 + 1.10557I$
$u = 0.383552 - 0.577713I$ $a = 0.12013 + 1.41029I$ $b = -0.127003 - 0.649722I$	$-3.70836 + 2.45187I$	$2.28902 - 1.10557I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.350709 + 0.593744I$ $a = 0.107351 + 0.504864I$ $b = -1.343700 - 0.316084I$	$0.83358 + 3.01735I$	$7.25837 - 0.49247I$
$u = -0.350709 - 0.593744I$ $a = 0.107351 - 0.504864I$ $b = -1.343700 + 0.316084I$	$0.83358 - 3.01735I$	$7.25837 + 0.49247I$
$u = 0.442910 + 0.518440I$ $a = -0.521192 + 1.076400I$ $b = 0.241180 - 0.446445I$	$-2.02036 + 1.50879I$	$4.97629 - 5.09309I$
$u = 0.442910 - 0.518440I$ $a = -0.521192 - 1.076400I$ $b = 0.241180 + 0.446445I$	$-2.02036 - 1.50879I$	$4.97629 + 5.09309I$
$u = 0.645827$ $a = -3.49684$ $b = 0.752757$	-0.308788	16.2550
$u = 1.42939 + 0.12884I$ $a = -0.715223 - 0.199859I$ $b = 0.242567 + 1.308940I$	$4.19828 - 5.82838I$	0
$u = 1.42939 - 0.12884I$ $a = -0.715223 + 0.199859I$ $b = 0.242567 - 1.308940I$	$4.19828 + 5.82838I$	0
$u = 1.44778 + 0.09666I$ $a = 0.890808 + 0.121968I$ $b = -0.777252 - 0.958438I$	$6.48020 - 0.70488I$	0
$u = 1.44778 - 0.09666I$ $a = 0.890808 - 0.121968I$ $b = -0.777252 + 0.958438I$	$6.48020 + 0.70488I$	0
$u = -0.219534 + 0.501040I$ $a = 0.048525 - 0.591352I$ $b = -0.992560 + 0.039651I$	$2.27210 + 0.14195I$	$7.85107 + 0.40000I$

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -0.219534 - 0.501040I$ $a = 0.048525 + 0.591352I$ $b = -0.992560 - 0.039651I$	$2.27210 - 0.14195I$	$7.85107 - 0.40000I$
$u = -0.128219 + 0.511830I$ $a = -0.235116 + 0.964407I$ $b = 0.956059 - 0.264958I$	$0.94305 - 4.90661I$	$4.88398 + 5.62400I$
$u = -0.128219 - 0.511830I$ $a = -0.235116 - 0.964407I$ $b = 0.956059 + 0.264958I$	$0.94305 + 4.90661I$	$4.88398 - 5.62400I$
$u = -1.47226 + 0.12075I$ $a = -0.646554 - 0.603418I$ $b = 1.07448 + 1.96891I$	$2.26225 + 0.10898I$	0
$u = -1.47226 - 0.12075I$ $a = -0.646554 + 0.603418I$ $b = 1.07448 - 1.96891I$	$2.26225 - 0.10898I$	0
$u = 1.48782 + 0.13055I$ $a = -1.266260 - 0.496751I$ $b = 1.79248 + 2.09730I$	$1.73920 + 2.36195I$	0
$u = 1.48782 - 0.13055I$ $a = -1.266260 + 0.496751I$ $b = 1.79248 - 2.09730I$	$1.73920 - 2.36195I$	0
$u = -1.49302 + 0.17302I$ $a = -0.365143 - 0.576564I$ $b = 0.27170 + 1.51342I$	$1.82198 - 6.26698I$	0
$u = -1.49302 - 0.17302I$ $a = -0.365143 + 0.576564I$ $b = 0.27170 - 1.51342I$	$1.82198 + 6.26698I$	0
$u = 1.51505$ $a = 0.596370$ $b = -0.787410$	7.16001	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = -1.51198 + 0.13240I$ $a = 0.718360 + 0.295013I$ $b = -1.39217 - 1.12726I$	$4.46397 - 3.74584I$	0
$u = -1.51198 - 0.13240I$ $a = 0.718360 - 0.295013I$ $b = -1.39217 + 1.12726I$	$4.46397 + 3.74584I$	0
$u = -1.52531 + 0.18019I$ $a = -0.095957 + 0.602649I$ $b = 0.632159 - 1.131610I$	$2.35354 - 3.51433I$	0
$u = -1.52531 - 0.18019I$ $a = -0.095957 - 0.602649I$ $b = 0.632159 + 1.131610I$	$2.35354 + 3.51433I$	0
$u = -1.54784 + 0.15010I$ $a = 0.800421 - 0.348125I$ $b = -1.84286 + 0.24135I$	$5.27378 - 4.50564I$	0
$u = -1.54784 - 0.15010I$ $a = 0.800421 + 0.348125I$ $b = -1.84286 - 0.24135I$	$5.27378 + 4.50564I$	0
$u = 1.54914 + 0.16225I$ $a = 2.40899 - 1.35253I$ $b = -5.46000 + 2.34055I$	$3.02625 + 6.41510I$	0
$u = 1.54914 - 0.16225I$ $a = 2.40899 + 1.35253I$ $b = -5.46000 - 2.34055I$	$3.02625 - 6.41510I$	0
$u = -1.55516 + 0.16682I$ $a = -0.698192 + 0.656632I$ $b = 1.77866 - 0.87693I$	$3.96996 - 9.00544I$	0
$u = -1.55516 - 0.16682I$ $a = -0.698192 - 0.656632I$ $b = 1.77866 + 0.87693I$	$3.96996 + 9.00544I$	0

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.56285 + 0.17763I$ $a = 2.12209 - 1.39087I$ $b = -4.66821 + 2.86534I$	$6.4302 + 15.3326I$	0
$u = 1.56285 - 0.17763I$ $a = 2.12209 + 1.39087I$ $b = -4.66821 - 2.86534I$	$6.4302 - 15.3326I$	0
$u = 1.56376 + 0.16947I$ $a = -2.16477 + 1.35365I$ $b = 4.71147 - 2.63450I$	$8.79025 + 9.66014I$	0
$u = 1.56376 - 0.16947I$ $a = -2.16477 - 1.35365I$ $b = 4.71147 + 2.63450I$	$8.79025 - 9.66014I$	0
$u = -1.57499$ $a = 3.21218$ $b = -7.08625$	7.27373	0
$u = 1.57066 + 0.11845I$ $a = 1.72662 - 1.03255I$ $b = -3.35704 + 1.54534I$	$9.89816 + 0.10218I$	0
$u = 1.57066 - 0.11845I$ $a = 1.72662 + 1.03255I$ $b = -3.35704 - 1.54534I$	$9.89816 - 0.10218I$	0
$u = 1.56925 + 0.13763I$ $a = -1.97809 + 1.10921I$ $b = 4.00616 - 1.77495I$	$10.73110 + 5.71945I$	0
$u = 1.56925 - 0.13763I$ $a = -1.97809 - 1.10921I$ $b = 4.00616 + 1.77495I$	$10.73110 - 5.71945I$	0
$u = -0.417322$ $a = -0.507402$ $b = -0.228914$	0.609628	16.4390

Solutions to I_1^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 1.58333 + 0.01332I$ $a = 0.212622 - 1.085020I$ $b = -0.36367 + 1.69619I$	$8.73171 + 2.18417I$	0
$u = 1.58333 - 0.01332I$ $a = 0.212622 + 1.085020I$ $b = -0.36367 - 1.69619I$	$8.73171 - 2.18417I$	0
$u = -1.60086 + 0.01874I$ $a = -2.81392 - 0.07195I$ $b = 5.91931 + 0.33569I$	$13.82740 - 2.12508I$	0
$u = -1.60086 - 0.01874I$ $a = -2.81392 + 0.07195I$ $b = 5.91931 - 0.33569I$	$13.82740 + 2.12508I$	0
$u = -1.60129 + 0.03305I$ $a = 2.69061 + 0.07587I$ $b = -5.63287 - 0.46743I$	$12.1159 - 7.8628I$	0
$u = -1.60129 - 0.03305I$ $a = 2.69061 - 0.07587I$ $b = -5.63287 + 0.46743I$	$12.1159 + 7.8628I$	0
$u = 0.119394 + 0.283485I$ $a = 0.05243 + 2.15878I$ $b = 0.425883 - 0.450283I$	$-1.64524 + 0.68396I$	$-1.89365 - 2.07297I$
$u = 0.119394 - 0.283485I$ $a = 0.05243 - 2.15878I$ $b = 0.425883 + 0.450283I$	$-1.64524 - 0.68396I$	$-1.89365 + 2.07297I$

$$\langle -u^5 + 2u^3 - u^2 + b + 1, u^5 - 3u^3 + u^2 + a + 2u - 2, u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1 \rangle$$

II. $I_2^u =$

(i) Arc colorings

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

$$a_{12} = \begin{pmatrix} 0 \\ u \end{pmatrix}$$

$$a_4 = \begin{pmatrix} -u^5 + 3u^3 - u^2 - 2u + 2 \\ u^5 - 2u^3 + u^2 - 1 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} 1 \\ -u^2 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} -u^5 + 3u^3 - u^2 - 2u + 2 \\ u^5 - 2u^3 + u^2 - 1 \end{pmatrix}$$

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

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

$$a_5 = \begin{pmatrix} u^4 - 3u^2 + 1 \\ u^5 - u^4 - 2u^3 + 3u^2 - u - 1 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -u^5 - u^4 + 3u^3 + 2u^2 - 2u + 1 \\ u^4 - 2u^2 + u \end{pmatrix}$$

$$a_{10} = \begin{pmatrix} u^3 - 2u \\ -u^3 + u \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -u^4 + 3u^2 - 1 \\ -u^5 + u^4 + 2u^3 - 3u^2 + u + 1 \end{pmatrix}$$

(ii) Obstruction class = 1

(iii) Cusp Shapes = $3u^5 + u^4 - 6u^3 - u^2 - 2u + 2$

(iv) u-Polynomials at the component

Crossings	u-Polynomials at each crossing
c_1, c_2	$(u - 1)^6$
c_3, c_8	u^6
c_4	$(u + 1)^6$
c_5, c_9	$u^6 - u^5 + 3u^4 - 2u^3 + 2u^2 - u - 1$
c_6, c_7	$u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1$
c_{10}, c_{11}	$u^6 - u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1$
c_{12}	$u^6 + u^5 + 3u^4 + 2u^3 + 2u^2 + u - 1$

(v) Riley Polynomials at the component

Crossings	Riley Polynomials at each crossing
c_1, c_2, c_4	$(y - 1)^6$
c_3, c_8	y^6
c_5, c_9, c_{12}	$y^6 + 5y^5 + 9y^4 + 4y^3 - 6y^2 - 5y + 1$
c_6, c_7, c_{10} c_{11}	$y^6 - 7y^5 + 17y^4 - 16y^3 + 6y^2 - 5y + 1$

(vi) Complex Volumes and Cusp Shapes

Solutions to I_2^u	$\sqrt{-1}(\text{vol} + \sqrt{-1}CS)$	Cusp shape
$u = 0.493180 + 0.575288I$ $a = 0.089969 - 0.799962I$ $b = -0.446039 - 0.121233I$	$-4.60518 + 1.97241I$	$2.71215 - 3.88360I$
$u = 0.493180 - 0.575288I$ $a = 0.089969 + 0.799962I$ $b = -0.446039 + 0.121233I$	$-4.60518 - 1.97241I$	$2.71215 + 3.88360I$
$u = -0.483672$ $a = 2.42043$ $b = -0.566232$	-0.906083	3.38760
$u = -1.52087 + 0.16310I$ $a = -0.227586 - 0.710576I$ $b = 0.87287 + 1.51178I$	$2.05064 - 4.59213I$	$6.49628 + 3.92496I$
$u = -1.52087 - 0.16310I$ $a = -0.227586 + 0.710576I$ $b = 0.87287 - 1.51178I$	$2.05064 + 4.59213I$	$6.49628 - 3.92496I$
$u = 1.53904$ $a = -1.14519$ $b = 2.71257$	6.01515	6.19550

III. u-Polynomials

Crossings	u-Polynomials at each crossing
c_1	$((u-1)^6)(u^{78} + 37u^{77} + \dots + 114u + 1)$
c_2	$((u-1)^6)(u^{78} - 7u^{77} + \dots - 14u + 1)$
c_3, c_8	$u^6(u^{78} + u^{77} + \dots - 800u^2 + 64)$
c_4	$((u+1)^6)(u^{78} - 7u^{77} + \dots - 14u + 1)$
c_5	$(u^6 - u^5 + 3u^4 - 2u^3 + 2u^2 - u - 1)(u^{78} - 2u^{77} + \dots - 14229u + 4721)$
c_6, c_7	$(u^6 + u^5 - 3u^4 - 2u^3 + 2u^2 - u - 1)(u^{78} + 2u^{77} + \dots - u + 1)$
c_9	$(u^6 - u^5 + 3u^4 - 2u^3 + 2u^2 - u - 1)(u^{78} + 14u^{77} + \dots + 2121u + 207)$
c_{10}, c_{11}	$(u^6 - u^5 - 3u^4 + 2u^3 + 2u^2 + u - 1)(u^{78} + 2u^{77} + \dots - u + 1)$
c_{12}	$(u^6 + u^5 + 3u^4 + 2u^3 + 2u^2 + u - 1)(u^{78} + 14u^{77} + \dots + 2121u + 207)$

IV. Riley Polynomials

Crossings	Riley Polynomials at each crossing
c_1	$((y - 1)^6)(y^{78} + 15y^{77} + \dots - 9330y + 1)$
c_2, c_4	$((y - 1)^6)(y^{78} - 37y^{77} + \dots - 114y + 1)$
c_3, c_8	$y^6(y^{78} - 39y^{77} + \dots - 102400y + 4096)$
c_5	$(y^6 + 5y^5 + 9y^4 + 4y^3 - 6y^2 - 5y + 1)$ $\cdot (y^{78} - 14y^{77} + \dots - 388528493y + 22287841)$
c_6, c_7, c_{10} c_{11}	$(y^6 - 7y^5 + \dots - 5y + 1)(y^{78} - 86y^{77} + \dots - y + 1)$
c_9, c_{12}	$(y^6 + 5y^5 + 9y^4 + 4y^3 - 6y^2 - 5y + 1)$ $\cdot (y^{78} + 46y^{77} + \dots + 505791y + 42849)$