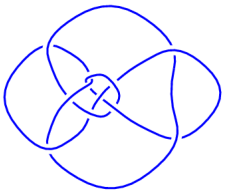
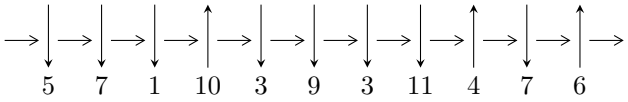
$11n_{184}$ $(K11n_{184})$



[1]

Arc Sequences



Solving Sequence

$$\underset{c_9}{4,9} \to \underset{c_{10}}{7,10} \to \underset{c_6}{11} \longrightarrow \underset{c_{11}}{6} \longrightarrow \underset{c_3}{1} \longrightarrow \underset{c_5}{3} \longrightarrow \underset{c_1}{5} \longrightarrow \underset{c_8}{2} \longrightarrow 8 \twoheadrightarrow c_2, c_4, c_7$$

Representation Ideals

$$I = \bigcap_{i=1}^{5} I_i^u$$

$I_1^u = \langle u-1,\ b,\ a+1\rangle$

$I_2^u = \langle b^2-2,\ u-1,\ b+a+1\rangle$

$I_3^u = \langle u^{18} - u^{17} + \cdots - 83u - 23,$
$-6.29390 \times 10^{28} u^{17} + 7.78891 \times 10^{28} u^{16} + \cdots + 2.04566 \times 10^{30} b + 6.03173 \times 10^{30},$
$2.66337 \times 10^{30} u^{17} - 2.65139 \times 10^{30} u^{16} + \cdots + 4.70503 \times 10^{31} a - 1.83610 \times 10^{32}\rangle$

$I_4^u = \langle u^{28} + 3u^{27} + \cdots - 125u + 17,$
$4.79286 \times 10^{45} u^{27} + 1.78737 \times 10^{46} u^{26} + \cdots + 1.41493 \times 10^{47} b + 2.94581 \times 10^{47},$
$-2.57383 \times 10^{48} u^{27} - 7.90436 \times 10^{48} u^{26} + \cdots + 2.40537 \times 10^{48} a + 1.28302 \times 10^{50}\rangle$

$I_5^u = \langle u^{36} - 4u^{35} + \cdots + 6947u - 251,$
$-1.60478 \times 10^{113} u^{35} + 5.79166 \times 10^{113} u^{34} + \cdots + 3.54731 \times 10^{115} b - 1.20162 \times 10^{116},$
$3.26903 \times 10^{115} u^{35} - 1.20817 \times 10^{116} u^{34} + \cdots + 1.78075 \times 10^{117} a + 7.32432 \times 10^{118}\rangle$

There are 5 irreducible components with 85 representations.

[1] The knot diagram image is adapter from "C. Livingston and A. H. Moore, KnotInfo: Table of Knot Invariants, http://www.indiana.edu/ knotinfo"

I. $I_1^u = \langle u-1,\ b,\ a+1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1 \\ 0 \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 1 \\ 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ -1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} 0 \\ -1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_1^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.00000$ $a = -1.00000$ $b = 0$	-3.28987	-12.0000

II. $I_2^u = \langle b^2 - 2,\ u - 1,\ b + a + 1 \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$
$$a_9 = \begin{pmatrix} -b - 1 \\ b \end{pmatrix}$$
$$a_7 = \begin{pmatrix} 0 \\ 1 \end{pmatrix}$$
$$a_{10} = \begin{pmatrix} -1 \\ b \end{pmatrix}$$
$$a_{11} = \begin{pmatrix} -1 \\ b - 1 \end{pmatrix}$$
$$a_6 = \begin{pmatrix} 2b + 3 \\ -b - 1 \end{pmatrix}$$
$$a_1 = \begin{pmatrix} -1 \\ b - 1 \end{pmatrix}$$
$$a_3 = \begin{pmatrix} b \\ 2b - 3 \end{pmatrix}$$
$$a_5 = \begin{pmatrix} b + 1 \\ -2 \end{pmatrix}$$
$$a_2 = \begin{pmatrix} b \\ b - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -2 \\ 3b - 3 \end{pmatrix}$$
$$a_8 = \begin{pmatrix} -2 \\ 3b - 3 \end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_2^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = \ \ 1.00000$ $a = \ \ 0.414214$ $b = -1.41421$	-3.28987	-44.0000
$u = \ \ 1.00000$ $a = -2.41421$ $b = \ \ 1.41421$	-3.28987	-44.0000

III. $I_3^u =$
$\langle u^{18}-u^{17}+\cdots-83u-23,\ -6.29\times10^{28}u^{17}+7.79\times10^{28}u^{16}+\cdots+2.05\times10^{30}b+6.03\times10^{30},\ 2.66\times10^{30}u^{17}-2.65\times10^{30}u^{16}+\cdots+4.71\times10^{31}a-1.84\times10^{32}\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}-0.0566070u^{17}+0.0563523u^{16}+\cdots-9.44672u+3.90242\\0.0307670u^{17}-0.0380752u^{16}+\cdots+4.32161u-2.94855\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}-0.0258400u^{17}+0.0182771u^{16}+\cdots-5.12511u+0.953870\\0.0307670u^{17}-0.0380752u^{16}+\cdots+4.32161u-2.94855\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}-0.0258400u^{17}+0.0182771u^{16}+\cdots-5.12511u+0.953870\\0.0270755u^{17}-0.0300346u^{16}+\cdots+3.09957u-3.12249\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.0203844u^{17}-0.0465566u^{16}+\cdots+8.34647u-2.28178\\-0.00506377u^{17}+0.0213564u^{16}+\cdots-0.784984u+1.85838\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-0.0000370538u^{17}+0.0218509u^{16}+\cdots-3.58871u+1.52433\\0.0395595u^{17}-0.0476383u^{16}+\cdots+3.12669u-3.93922\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.0575043u^{17}+0.0787965u^{16}+\cdots-5.74565u+8.16136\\0.0806359u^{17}-0.0971476u^{16}+\cdots+3.85683u-7.19376\end{pmatrix}$$
$$a_5 = \begin{pmatrix}-0.0313879u^{17}+0.0313655u^{16}+\cdots+1.52654u+5.36444\\0.0494111u^{17}-0.0544972u^{16}+\cdots+1.90750u-4.12685\end{pmatrix}$$
$$a_2 = \begin{pmatrix}-0.0575043u^{17}+0.0787965u^{16}+\cdots-5.74565u+8.16136\\0.0835851u^{17}-0.0956861u^{16}+\cdots+3.41218u-7.68348\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.0789474u^{17}+0.0939882u^{16}+\cdots-7.25354u+7.88993\\0.0455677u^{17}-0.0598726u^{16}+\cdots+2.33159u-4.53145\end{pmatrix}$$
$$a_8 = \begin{pmatrix}-0.0789474u^{17}+0.0939882u^{16}+\cdots-7.25354u+7.88993\\0.0455677u^{17}-0.0598726u^{16}+\cdots+2.33159u-4.53145\end{pmatrix}$$

(ii) Obstruction class $= 1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-2.58784-1.47981I$ $a=\ \ 0.078364-0.177205I$ $b=\ \ 0.631814+0.103081I$	$1.92430+3.93083I$	$-7.6382-13.9939I$
$u=-2.58784+1.47981I$ $a=\ \ 0.078364+0.177205I$ $b=\ \ 0.631814-0.103081I$	$1.92430-3.93083I$	$-7.6382+13.9939I$
$u=-1.53928$ $a=-0.611253$ $b=-0.845186$	-5.14686	3.50430
$u=-0.232302-0.025656I$ $a=\ \ 1.81397-1.20104I$ $b=-0.822250+0.912603I$	$-2.29959+1.27814I$	$-15.7772-13.4535I$
$u=-0.232302+0.025656I$ $a=\ \ 1.81397+1.20104I$ $b=-0.822250-0.912603I$	$-2.29959-1.27814I$	$-15.7772+13.4535I$
$u=\ \ 0.237029-1.026868I$ $a=\ \ 0.108161-0.908040I$ $b=-0.996123+0.550603I$	$-1.46928-6.40624I$	$-13.4313+7.0584I$
$u=\ \ 0.237029+1.026868I$ $a=\ \ 0.108161+0.908040I$ $b=-0.996123-0.550603I$	$-1.46928+6.40624I$	$-13.4313-7.0584I$
$u=\ \ 0.38613-2.10322I$ $a=\ \ 0.593638+0.368176I$ $b=-1.38034-0.42829I$	$6.06294+4.89735I$	$-1.40550-2.57464I$
$u=\ \ 0.38613+2.10322I$ $a=\ \ 0.593638-0.368176I$ $b=-1.38034+0.42829I$	$6.06294-4.89735I$	$-1.40550+2.57464I$
$u=\ \ 0.386681-0.868938I$ $a=\ \ 1.34559+0.73177I$ $b=-0.631814-0.103081I$	$1.92430+3.93083I$	$-7.6382-13.9939I$

Solution to I_3^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.386681 + 0.868938I$ $a = 1.34559 - 0.73177I$ $b = -0.631814 + 0.103081I$	$1.92430 - 3.93083I$	$-7.6382 + 13.9939I$
$u = 0.445869 - 0.276885I$ $a = -2.94638 + 0.60643I$ $b = 0.822250 - 0.912603I$	$-2.29959 + 1.27814I$	$-15.7772 - 13.4535I$
$u = 0.445869 + 0.276885I$ $a = -2.94638 - 0.60643I$ $b = 0.822250 + 0.912603I$	$-2.29959 - 1.27814I$	$-15.7772 + 13.4535I$
$u = 0.700962 - 1.201847I$ $a = -0.301589 + 0.122856I$ $b = 1.38034 + 0.42829I$	$6.06294 + 4.89735I$	$-1.40550 - 2.57464I$
$u = 0.700962 + 1.201847I$ $a = -0.301589 - 0.122856I$ $b = 1.38034 - 0.42829I$	$6.06294 - 4.89735I$	$-1.40550 + 2.57464I$
$u = 0.77412 - 2.19584I$ $a = -0.644810 - 0.243274I$ $b = 0.996123 + 0.550603I$	$-1.46928 + 6.40624I$	$-13.4313 - 7.0584I$
$u = 0.77412 + 2.19584I$ $a = -0.644810 + 0.243274I$ $b = 0.996123 - 0.550603I$	$-1.46928 - 6.40624I$	$-13.4313 + 7.0584I$
$u = 2.31799$ $a = -0.917422$ $b = 0.845186$	-5.14686	3.50430

IV. $I_4^u =$
$\langle u^{28}+3u^{27}+\cdots-125u+17,\ 4.79\times10^{45}u^{27}+1.79\times10^{46}u^{26}+\cdots+1.41\times10^{47}b+2.95\times10^{47},\ -2.57\times10^{48}u^{27}-7.90\times10^{48}u^{26}+\cdots+2.41\times10^{48}a+1.28\times10^{50}\rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix}1\\0\end{pmatrix}$$
$$a_9 = \begin{pmatrix}1.07003u^{27}+3.28612u^{26}+\cdots+337.294u-53.3398\\-0.0338736u^{27}-0.126322u^{26}+\cdots+2.66788u-2.08195\end{pmatrix}$$
$$a_7 = \begin{pmatrix}0\\u\end{pmatrix}$$
$$a_{10} = \begin{pmatrix}1.03616u^{27}+3.15980u^{26}+\cdots+339.962u-55.4218\\-0.0338736u^{27}-0.126322u^{26}+\cdots+2.66788u-2.08195\end{pmatrix}$$
$$a_{11} = \begin{pmatrix}1.03616u^{27}+3.15980u^{26}+\cdots+339.962u-55.4218\\-0.153416u^{27}-0.550842u^{26}+\cdots-8.53128u-2.95447\end{pmatrix}$$
$$a_6 = \begin{pmatrix}0.575962u^{27}+1.63101u^{26}+\cdots+253.342u-47.9590\\-0.593887u^{27}-1.97693u^{26}+\cdots-115.735u+12.0035\end{pmatrix}$$
$$a_1 = \begin{pmatrix}-0.646484u^{27}-2.07816u^{26}+\cdots-159.429u+18.8095\\-0.0760259u^{27}-0.111273u^{26}+\cdots-80.4143u+18.1906\end{pmatrix}$$
$$a_3 = \begin{pmatrix}-0.969330u^{27}-2.81311u^{26}+\cdots-384.472u+69.1116\\0.0968707u^{27}+0.406344u^{26}+\cdots-24.0363u+9.79135\end{pmatrix}$$
$$a_5 = \begin{pmatrix}0.837132u^{27}+3.09284u^{26}+\cdots+19.6620u+21.6994\\0.131042u^{27}+0.380680u^{26}+\cdots+50.9563u-7.77398\end{pmatrix}$$
$$a_2 = \begin{pmatrix}0.969330u^{27}+2.81311u^{26}+\cdots+384.472u-69.1116\\0.0844514u^{27}+0.211743u^{26}+\cdots+52.3746u-11.4043\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.963788u^{27}+3.43540u^{26}+\cdots+75.0046u+11.8074\\0.757135u^{27}+2.39383u^{26}+\cdots+209.166u-30.1609\end{pmatrix}$$
$$a_8 = \begin{pmatrix}0.963788u^{27}+3.43540u^{26}+\cdots+75.0046u+11.8074\\0.757135u^{27}+2.39383u^{26}+\cdots+209.166u-30.1609\end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.731240-0.064447I$ $a=-0.823313-0.952322I$ $b=-0.097920-0.715313I$	$4.52132-1.28199I$	$-1.48628+3.62447I$
$u=-0.731240+0.064447I$ $a=-0.823313+0.952322I$ $b=-0.097920+0.715313I$	$4.52132+1.28199I$	$-1.48628-3.62447I$
$u=-0.63877-2.06429I$ $a=\ \ 0.585474-0.449236I$ $b=-1.299883+0.322120I$	$2.44490-7.44961I$	$-1.45384+5.70278I$
$u=-0.63877+2.06429I$ $a=\ \ 0.585474+0.449236I$ $b=-1.299883-0.322120I$	$2.44490+7.44961I$	$-1.45384-5.70278I$
$u=-0.62953-2.23645I$ $a=-0.579647+0.369147I$ $b=\ \ 1.42770-0.62293I$	$8.0703-16.3840I$	$-2.82061+8.06423I$
$u=-0.62953+2.23645I$ $a=-0.579647-0.369147I$ $b=\ \ 1.42770+0.62293I$	$8.0703+16.3840I$	$-2.82061-8.06423I$
$u=-0.58519-1.57794I$ $a=-0.210407-0.074791I$ $b=\ \ 1.099022+0.606761I$	$7.22801+2.43402I$	$1.57040-0.59342I$
$u=-0.58519+1.57794I$ $a=-0.210407+0.074791I$ $b=\ \ 1.099022-0.606761I$	$7.22801-2.43402I$	$1.57040+0.59342I$
$u=-0.44223-1.70839I$ $a=-0.525393+0.471037I$ $b=\ \ 1.216128+0.158248I$	$8.36654+1.60580I$	$-0.541797-0.240729I$
$u=-0.44223+1.70839I$ $a=-0.525393-0.471037I$ $b=\ \ 1.216128-0.158248I$	$8.36654-1.60580I$	$-0.541797+0.240729I$

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.377717-0.710971I$ $a=-0.17452-1.46846I$ $b=\ \ 0.014763+0.486702I$	$-1.69684+4.08256I$	$-6.58477-6.33725I$
$u=-0.377717+0.710971I$ $a=-0.17452+1.46846I$ $b=\ \ 0.014763-0.486702I$	$-1.69684-4.08256I$	$-6.58477+6.33725I$
$u=-0.244035-0.890628I$ $a=\ \ 0.228727+0.651636I$ $b=-0.892804-0.444060I$	$1.26054+1.72230I$	$-0.40850-1.70276I$
$u=-0.244035+0.890628I$ $a=\ \ 0.228727-0.651636I$ $b=-0.892804+0.444060I$	$1.26054-1.72230I$	$-0.40850+1.70276I$
$u=-0.05973-1.53422I$ $a=-0.473924-0.658984I$ $b=\ \ 0.802643+0.305370I$	$-1.15395+4.47162I$	$-7.14862-4.64379I$
$u=-0.05973+1.53422I$ $a=-0.473924+0.658984I$ $b=\ \ 0.802643-0.305370I$	$-1.15395-4.47162I$	$-7.14862+4.64379I$
$u=\ \ 0.238216-0.285105I$ $a=\ \ 3.55235+0.24485I$ $b=\ \ 0.062707-1.338023I$	$3.71060+9.58638I$	$-3.92148-6.82839I$
$u=\ \ 0.238216+0.285105I$ $a=\ \ 3.55235-0.24485I$ $b=\ \ 0.062707+1.338023I$	$3.71060-9.58638I$	$-3.92148+6.82839I$
$u=\ \ 0.251849-0.286150I$ $a=-1.59320+0.43835I$ $b=\ \ 0.218854-1.012420I$	$-1.38872+0.92374I$	$-4.94776-7.36786I$
$u=\ \ 0.251849+0.286150I$ $a=-1.59320-0.43835I$ $b=\ \ 0.218854+1.012420I$	$-1.38872-0.92374I$	$-4.94776+7.36786I$

Solution to I_4^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.354448 - 1.303945I$ $a = 0.907226 + 0.089268I$ $b = -1.68545 + 0.44537I$	$9.49594 + 2.56707I$	$1.74205 - 3.34695I$
$u = 0.354448 + 1.303945I$ $a = 0.907226 - 0.089268I$ $b = -1.68545 - 0.44537I$	$9.49594 - 2.56707I$	$1.74205 + 3.34695I$
$u = 0.376402 - 0.040088I$ $a = -1.89008 + 1.03511I$ $b = 0.584905 - 0.590380I$	$-1.36729 + 0.61050I$	$-5.48708 - 0.91172I$
$u = 0.376402 + 0.040088I$ $a = -1.89008 - 1.03511I$ $b = 0.584905 + 0.590380I$	$-1.36729 - 0.61050I$	$-5.48708 + 0.91172I$
$u = 0.39643 - 2.55523I$ $a = 0.374449 + 0.114776I$ $b = -1.193668 - 0.454674I$	$7.75458 + 5.65256I$	$3.62489 - 8.19789I$
$u = 0.39643 + 2.55523I$ $a = 0.374449 - 0.114776I$ $b = -1.193668 + 0.454674I$	$7.75458 - 5.65256I$	$3.62489 + 8.19789I$
$u = 0.59110 - 1.65967I$ $a = -0.642460 - 0.003573I$ $b = 1.243004 + 0.278668I$	$2.92454 + 5.00287I$	$-4.13660 - 6.40651I$
$u = 0.59110 + 1.65967I$ $a = -0.642460 + 0.003573I$ $b = 1.243004 - 0.278668I$	$2.92454 - 5.00287I$	$-4.13660 + 6.40651I$

V. $I_5^u = \langle u^{36} - 4u^{35} + \cdots + 6947u - 251,\ -1.60 \times 10^{113}u^{35} + 5.79 \times 10^{113}u^{34} + \cdots + 3.55 \times 10^{115}b - 1.20 \times 10^{116},\ 3.27 \times 10^{115}u^{35} - 1.21 \times 10^{116}u^{34} + \cdots + 1.78 \times 10^{117}a + 7.32 \times 10^{118} \rangle$

(i) Arc colorings

$$a_4 = \begin{pmatrix} 1 \\ 0 \end{pmatrix}$$

$$a_9 = \begin{pmatrix} -0.0183576u^{35} + 0.0678462u^{34} + \cdots + 476.120u - 41.1305 \\ 0.00452393u^{35} - 0.0163269u^{34} + \cdots - 65.7623u + 3.38741 \end{pmatrix}$$

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

$$a_{10} = \begin{pmatrix} -0.0138337u^{35} + 0.0515193u^{34} + \cdots + 410.358u - 37.7431 \\ 0.00452393u^{35} - 0.0163269u^{34} + \cdots - 65.7623u + 3.38741 \end{pmatrix}$$

$$a_{11} = \begin{pmatrix} -0.0138337u^{35} + 0.0515193u^{34} + \cdots + 410.358u - 37.7431 \\ 0.00342044u^{35} - 0.0119163u^{34} + \cdots - 42.7286u + 2.42973 \end{pmatrix}$$

$$a_6 = \begin{pmatrix} 0.0212397u^{35} - 0.0808632u^{34} + \cdots - 646.439u + 53.6809 \\ -0.00155932u^{35} + 0.00692705u^{34} + \cdots + 67.5224u - 3.77705 \end{pmatrix}$$

$$a_1 = \begin{pmatrix} -0.00497737u^{35} + 0.0218875u^{34} + \cdots + 328.554u - 28.7881 \\ 0.00146486u^{35} - 0.00509672u^{34} + \cdots - 29.0936u + 1.76728 \end{pmatrix}$$

$$a_3 = \begin{pmatrix} 0.00361538u^{35} - 0.0131803u^{34} + \cdots - 146.842u + 15.6730 \\ 0.00152183u^{35} - 0.00499712u^{34} + \cdots - 5.99081u - 0.140753 \end{pmatrix}$$

$$a_5 = \begin{pmatrix} 0.0124398u^{35} - 0.0481132u^{34} + \cdots - 402.350u + 35.2077 \\ -0.00260825u^{35} + 0.0105195u^{34} + \cdots + 76.3882u - 3.80851 \end{pmatrix}$$

$$a_2 = \begin{pmatrix} -0.00361538u^{35} + 0.0131803u^{34} + \cdots + 146.842u - 15.6730 \\ -0.000438594u^{35} + 0.00141548u^{34} + \cdots - 2.00255u + 0.462346 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00995392u^{35} + 0.0348670u^{34} + \cdots + 169.876u - 12.0464 \\ -0.00271014u^{35} + 0.00975590u^{34} + \cdots + 35.9719u - 1.16357 \end{pmatrix}$$

$$a_8 = \begin{pmatrix} -0.00995392u^{35} + 0.0348670u^{34} + \cdots + 169.876u - 12.0464 \\ -0.00271014u^{35} + 0.00975590u^{34} + \cdots + 35.9719u - 1.16357 \end{pmatrix}$$

(ii) Obstruction class $= -1$

(iii) Cusp Shapes =unknown

(iv) Complex Volumes and Cusp Shapes

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-2.55937-1.36105I$ $a=-0.0143120-0.0886356I$ $b=-0.629486+0.021587I$	$2.02553+3.59036I$	$-0.89678+6.78897I$
$u=-2.55937+1.36105I$ $a=-0.0143120+0.0886356I$ $b=-0.629486-0.021587I$	$2.02553-3.59036I$	$-0.89678-6.78897I$
$u=-1.08331$ $a=-0.318983$ $b=\ \ 1.35768$	-3.16853	23.1983
$u=-0.79823-2.05730I$ $a=-0.520364+0.220406I$ $b=\ \ 1.42125-0.38509I$	$8.94298-7.76278I$	$-0.81388+5.96589I$
$u=-0.79823+2.05730I$ $a=-0.520364-0.220406I$ $b=\ \ 1.42125+0.38509I$	$8.94298+7.76278I$	$-0.81388-5.96589I$
$u=-0.67006-1.75253I$ $a=\ \ 0.651911-0.052080I$ $b=-1.32619$	4.77670	-0.191180
$u=-0.67006+1.75253I$ $a=\ \ 0.651911+0.052080I$ $b=-1.32619$	4.77670	-0.191180
$u=-0.605069-0.943581I$ $a=\ \ 0.556517-0.126671I$ $b=-1.60799+0.59422I$	$5.93656-5.69637I$	$-3.56158+12.64720I$
$u=-0.605069+0.943581I$ $a=\ \ 0.556517+0.126671I$ $b=-1.60799-0.59422I$	$5.93656+5.69637I$	$-3.56158-12.64720I$
$u=-0.59070-1.58922I$ $a=-0.979929+0.260708I$ $b=\ \ 1.42125+0.38509I$	$8.94298+7.76278I$	$-0.81388-5.96589I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u=-0.59070+1.58922I$ $a=-0.979929-0.260708I$ $b=\ \ 1.42125-0.38509I$	$8.94298-7.76278I$	$-0.81388+5.96589I$
$u=-0.422925-1.232861I$ $a=-0.659000+0.587089I$ $b=-0.517954-0.930078I$	$3.10062+3.22877I$	$-6.92519-4.57894I$
$u=-0.422925+1.232861I$ $a=-0.659000-0.587089I$ $b=-0.517954+0.930078I$	$3.10062-3.22877I$	$-6.92519+4.57894I$
$u=-0.010873-0.481141I$ $a=\ \ 0.107938+0.595624I$ $b=\ \ 0.695159-0.848524I$	$-2.09116+0.97054I$	$-2.23750+5.32372I$
$u=-0.010873+0.481141I$ $a=\ \ 0.107938-0.595624I$ $b=\ \ 0.695159+0.848524I$	$-2.09116-0.97054I$	$-2.23750-5.32372I$
$u=\ \ 0.0598707$ $a=-21.0125$ $b=\ \ 0.853350$	-1.86607	-5.91386
$u=\ \ 0.285810-0.253999I$ $a=-3.60193-0.14308I$ $b=\ \ 0.695159-0.848524I$	$-2.09116+0.97054I$	$-2.23750+5.32372I$
$u=\ \ 0.285810+0.253999I$ $a=-3.60193+0.14308I$ $b=\ \ 0.695159+0.848524I$	$-2.09116-0.97054I$	$-2.23750-5.32372I$
$u=\ \ 0.32385-1.93426I$ $a=\ \ 0.705179+0.633171I$ $b=-1.60799-0.59422I$	$5.93656+5.69637I$	$-3.56158-12.64720I$
$u=\ \ 0.32385+1.93426I$ $a=\ \ 0.705179-0.633171I$ $b=-1.60799+0.59422I$	$5.93656-5.69637I$	$-3.56158+12.64720I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 0.372405 - 0.956805I$ $a = -0.042108 + 0.763185I$ $b = 0.992764 - 0.622226I$	$-0.99172 - 6.40330I$	$3.42158 + 6.30629I$
$u = 0.372405 + 0.956805I$ $a = -0.042108 - 0.763185I$ $b = 0.992764 + 0.622226I$	$-0.99172 + 6.40330I$	$3.42158 - 6.30629I$
$u = 0.378089 - 0.480177I$ $a = 2.19832 + 0.70237I$ $b = -0.629486 + 0.021587I$	$2.02553 + 3.59036I$	$-0.89678 + 6.78897I$
$u = 0.378089 + 0.480177I$ $a = 2.19832 - 0.70237I$ $b = -0.629486 - 0.021587I$	$2.02553 - 3.59036I$	$-0.89678 - 6.78897I$
$u = 0.515425 - 0.175411I$ $a = 1.75121 - 0.23244I$ $b = -0.517954 - 0.930078I$	$3.10062 + 3.22877I$	$-6.92519 - 4.57894I$
$u = 0.515425 + 0.175411I$ $a = 1.75121 + 0.23244I$ $b = -0.517954 + 0.930078I$	$3.10062 - 3.22877I$	$-6.92519 + 4.57894I$
$u = 0.75620 - 2.15496I$ $a = -0.635527 - 0.225345I$ $b = 0.992764 + 0.622226I$	$-0.99172 + 6.40330I$	$3.42158 - 6.30629I$
$u = 0.75620 + 2.15496I$ $a = -0.635527 + 0.225345I$ $b = 0.992764 - 0.622226I$	$-0.99172 - 6.40330I$	$3.42158 + 6.30629I$
$u = 1.00473$ $a = -0.562627$ $b = 0.853350$	-1.86607	-5.91386
$u = 1.03221 - 2.16455I$ $a = 0.672914 + 0.205500I$ $b = -1.153562 - 0.127277I$	$4.01524 + 4.53987I$	$-4.29652 - 4.59405I$

Solution to I_5^u	$\sqrt{-1}(\mathrm{vol}+\sqrt{-1}CS)$	Cusp shape
$u = 1.03221 + 2.16455I$ $a = 0.672914 - 0.205500I$ $b = -1.153562 + 0.127277I$	$4.01524 - 4.53987I$	$-4.29652 + 4.59405I$
$u = 1.09336$ $a = -2.15786$ $b = 1.35768$	-3.16853	23.1983
$u = 1.47647$ $a = 0.631554$ $b = 0.714803$	-5.42967	-25.4735
$u = 1.64861 - 0.22586I$ $a = -0.523780 - 0.153130I$ $b = -1.153562 + 0.127277I$	$4.01524 - 4.53987I$	$-4.29652 + 4.59405I$
$u = 1.64861 + 0.22586I$ $a = -0.523780 + 0.153130I$ $b = -1.153562 - 0.127277I$	$4.01524 + 4.53987I$	$-4.29652 - 4.59405I$
$u = 2.13817$ $a = -0.969448$ $b = 0.714803$	-5.42967	-25.4735

VI. u-Polynomials

Crossings	u-Polynomials at each crossings
c_1	$(u-1)^2(u+1)(u^{18}-6u^{16}+\cdots+13u-1)(u^{28}-u^{27}+\cdots-303u+49)$ $(u^{36}+u^{35}+\cdots+2025u+675)$
c_2, c_7	$(u)(u^2-2)(u^{18}+4u^{16}+\cdots+9u^2-2)$ $(1+9u+52u^2+161u^3+250u^4+165u^5+56u^6-38u^7-191u^8-49u^9-118u^{10}+7u^{11}-u$ $(u^{28}+3u^{27}+\cdots-120u+26)$
c_3	$(u+1)(u^2+2u-1)(u^{18}+5u^{17}+\cdots-8u-1)(u^{28}+u^{27}+\cdots+u+1)$ $(u^{36}+4u^{35}+\cdots+8u+1)$
c_4, c_9	$u(u^2-2)$ $(-7+3u+40u^2-7u^3-88u^4-u^5+102u^6-89u^8+19u^9+78u^{10}-21u^{11}-59u^{12}+8u^{13}$ $(u^{18}-6u^{16}+19u^{14}-40u^{12}+66u^{10}-82u^8+76u^6-46u^4+15u^2-2)$ $(u^{28}+3u^{27}+\cdots+40u+10)$
c_5	$(u-1)(u^2-2u-1)(u^{18}-u^{15}+\cdots+2u^2-1)(u^{28}+u^{27}+\cdots-21u+5)$ $(u^{36}+7u^{35}+\cdots-512u+139)$
c_6	$(u-1)(u^2-2u-1)(u^{18}-5u^{17}+\cdots+8u-1)(u^{28}+u^{27}+\cdots+u+1)$ $(u^{36}+4u^{35}+\cdots+8u+1)$
c_8	$(u-1)(u^2+2u-1)(u^{18}+u^{15}+\cdots+2u^2-1)(u^{28}+u^{27}+\cdots-21u+5)$ $(u^{36}+7u^{35}+\cdots-512u+139)$
c_{10}	$(u+1)^3(u^{18}-6u^{16}+\cdots-13u-1)(u^{28}+u^{27}+\cdots+303u+49)$ $(u^{36}-u^{35}+\cdots-2025u+675)$
c_{11}	u^3 $(1+10u+32u^2+30u^3-30u^4-83u^5-74u^6-2u^7+41u^8-66u^9-16u^{10}+66u^{11}+11u^{12}$ $(u^{18}-2u^{16}+21u^{14}+27u^{10}-174u^8+205u^6+30u^4-53u^2-32)$ $(u^{28}+3u^{27}+\cdots+56u+8)$

VII. Riley Polynomials

Crossings	Riley Polynomials at each crossings
c_1, c_{10}	$(y-1)^3(y^{18}-12y^{17}+\cdots-71y+1)$ $(y^{28}+29y^{27}+\cdots-8019y+2401)$ $(y^{36}-9y^{35}+\cdots-2634525y+455625)$
c_2, c_7	$y(y-2)^2$ $(y^9+4y^8-2y^7-22y^6-13y^5+16y^4-3y^3-11y^2+9y-2)^2$ $(1+23y+306y^2-2779y^3+1.55\times10^4y^4-6207y^5-7.64\times10^4y^6-6.81\times10^4y^7+1.63\times$ $(y^{28}+23y^{27}+\cdots-1816y+676)$
c_3, c_6	$(y-1)(y^2-6y+1)(y^{18}-7y^{17}+\cdots-8y^2+1)(y^{28}+y^{27}+\cdots+17y+1)$ $(y^{36}-16y^{35}+\cdots-18y+1)$
c_4, c_9	$y(y-2)^2$ $(y^9-6y^8+19y^7-40y^6+66y^5-82y^4+76y^3-46y^2+15y-2)^2$ $(49-569y+2874y^2-8511y^3+1.71\times10^4y^4-2.63\times10^4y^5+3.35\times10^4y^6-3.73\times10^4y^7-$ $(y^{28}-17y^{27}+\cdots+560y+100)$
c_5, c_8	$(y-1)(y^2-6y+1)(y^{18}-8y^{16}+\cdots-4y+1)$ $(y^{28}+19y^{27}+\cdots+379y+25)(y^{36}-3y^{35}+\cdots-372232y+19321)$
c_{11}	$y^3(y^9-2y^8+21y^7+27y^5-174y^4+205y^3+30y^2-53y-32)^2$ $(1-36y+364y^2-1308y^3+1266y^4+1583y^5+4322y^6-1.89\times10^4y^7+1.60\times10^4y^8-1.1$ $(y^{28}-y^{27}+\cdots+640y+64)$