## SAMB for "SrVO3"

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- Generation condition
  - model type: tight\_binding
  - time-reversal type: electric
  - irrep: [A1g]
  - spinless
- Unit cell:

$$a=3.8409,\ b=3.8409,\ c=3.8409,\ \alpha=90.0,\ \beta=90.0,\ \gamma=90.0$$

• Lattice vectors:

$$a_1 = (3.8409 \quad 0 \quad 0)$$

$$\mathbf{a}_2 = \begin{pmatrix} 0 & 3.8409 & 0 \end{pmatrix}$$

$$\mathbf{a}_3 = \begin{pmatrix} 0 & 0 & 3.8409 \end{pmatrix}$$

Table 1: High-symmetry line:  $R-\Gamma-X-R-M-\Gamma$ .

symbol	position	symbol	position	symbol	position
R	$\begin{pmatrix} \frac{1}{2} & \frac{1}{2} & \frac{1}{2} \end{pmatrix}$	Γ	$\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$	X	$\begin{pmatrix} \frac{1}{2} & 0 & 0 \end{pmatrix}$
M	$\begin{pmatrix} \frac{1}{2} & \frac{1}{2} & 0 \end{pmatrix}$		, , , , , , , , , , , , , , , , , , ,		, ,

• Kets: dimension = 3

Table 2: Hilbert space for full matrix.

No.	ket	No.	ket	No.	ket
1	$d_{yz}$ @V <sub>1</sub>	2	$d_{zx}$ @V <sub>1</sub>	3	$d_{xy}$ @V <sub>1</sub>

• Sites in (primitive) unit cell:

Table 3: Site-clusters.

	site	position	mapping
$S_1$ [1a: m-3m]	$V_1$	$\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$	[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48]

• Bonds in (primitive) unit cell:

Table 4: Bond-clusters.

	bond	tail	head	n	#	b@c	mapping
B <sub>1</sub> [3d: 4/mm.m]	$b_1$	$V_1$	$V_1$	1	1		[1,2,-3,-4,-5,-8,19,22,-25,-26,27,28,29,32,-43,-46]
	$b_2$	$V_1$	$V_1$	1	1		[6, -9, 11, -12, 13, -14, 21, -24, -30, 33, -35, 36, -37, 38, -45, 48]
	$b_3$	$V_1$	$V_1$	1	1	$ \left( \begin{array}{cccc} 0 & 1 & 0 \end{array} \right) @ \left( \begin{array}{cccc} 0 & \frac{1}{2} & 0 \end{array} \right) $	[7, -10, 15, 16, -17, -18, -20, 23, -31, 34, -39, -40, 41, 42, 44, -47]
B <sub>2</sub> [3c: 4/mm.m]	$b_4$	$V_1$	$V_1$	2	1	$\begin{pmatrix} 0 & 1 & 1 \end{pmatrix} @ \begin{pmatrix} 0 & \frac{1}{2} & \frac{1}{2} \end{pmatrix}$	[1,-3,7,-10,-25,27,-31,34]
	$b_5$	$V_1$	$V_1$	2	1	$ \left  \begin{array}{cccc} \begin{pmatrix} 1 & 1 & -1 \end{pmatrix} & \begin{pmatrix} 1 & 1 & 1 \\ 0 & 1 & -1 \end{pmatrix} \right  = \left( \begin{array}{cccc} 1 & 1 & 1 \\ 0 & 1 & 1 \end{array} \right) $	[-2,4,-20,23,26,-28,44,-47]
	$b_6$	$V_1$	$V_1$	2	1	$ \left  \begin{array}{ccc} \left(1 & 0 & -1\right) @ \left(\frac{1}{2} & 0 & \frac{1}{2}\right) \end{array} \right  $	[5,-12,13,-19,-29,36,-37,43]
	$b_7$	$V_1$	$V_1$	2	1	$ \left  \begin{array}{ccc} \left( 1 & -1 & 0 \right) @ \left( \frac{1}{2} & \frac{1}{2} & 0 \right) \right  $	[6, -16, 18, -24, -30, 40, -42, 48]
	$b_8$	$V_1$	$V_1$	2	1	$\begin{pmatrix} 1 & 0 & 1 \end{pmatrix} @ \begin{pmatrix} \frac{1}{2} & 0 & \frac{1}{2} \end{pmatrix}$	[-8,11,-14,22,32,-35,38,-46]
	b <sub>9</sub>	$V_1$	$V_1$	2	1		[-9,15,-17,21,33,-39,41,-45]

## • SAMB:

No. 1 
$$\hat{\mathbb{Q}}_0^{(A_{1g})}$$
 [M<sub>1</sub>, S<sub>1</sub>]

$$\hat{\mathbb{Z}}_1 = \mathbb{X}_1[\mathbb{Q}_0^{(a,A_{1g})}] \otimes \mathbb{Y}_1[\mathbb{Q}_0^{(s,A_{1g})}]$$

No. 2 
$$\hat{\mathbb{Q}}_0^{(A_{1g})}$$
 [M<sub>1</sub>, B<sub>1</sub>]

$$\hat{\mathbb{Z}}_2 = \mathbb{X}_1[\mathbb{Q}_0^{(a,A_{1g})}] \otimes \mathbb{Y}_2[\mathbb{Q}_0^{(b,A_{1g})}]$$

No. 3 
$$\hat{\mathbb{Q}}_0^{(A_{1g})}$$
 [M<sub>1</sub>, B<sub>1</sub>]

$$\hat{\mathbb{Z}}_3 = \frac{\sqrt{2}\mathbb{X}_2[\mathbb{Q}_{2,0}^{(a,E_g)}] \otimes \mathbb{Y}_3[\mathbb{Q}_{2,0}^{(b,E_g)}]}{2} + \frac{\sqrt{2}\mathbb{X}_3[\mathbb{Q}_{2,1}^{(a,E_g)}] \otimes \mathbb{Y}_4[\mathbb{Q}_{2,1}^{(b,E_g)}]}{2}$$

No. 4 
$$\hat{\mathbb{Q}}_0^{(A_{1g})}$$
 [M<sub>1</sub>, B<sub>2</sub>]

$$\hat{\mathbb{Z}}_4 = \mathbb{X}_1[\mathbb{Q}_0^{(a,A_{1g})}] \otimes \mathbb{Y}_5[\mathbb{Q}_0^{(b,A_{1g})}]$$

No. 5 
$$\hat{\mathbb{Q}}_0^{(A_{1g})}$$
 [M<sub>1</sub>, B<sub>2</sub>]

$$\hat{\mathbb{Z}}_{5} = \frac{\sqrt{5}\mathbb{X}_{2}[\mathbb{Q}_{2,0}^{(a,E_{g})}] \otimes \mathbb{Y}_{6}[\mathbb{Q}_{2,0}^{(b,E_{g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{3}[\mathbb{Q}_{2,1}^{(a,E_{g})}] \otimes \mathbb{Y}_{7}[\mathbb{Q}_{2,1}^{(b,E_{g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{4}[\mathbb{Q}_{2,0}^{(a,T_{2g})}] \otimes \mathbb{Y}_{8}[\mathbb{Q}_{2,0}^{(b,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{5}[\mathbb{Q}_{2,1}^{(a,T_{2g})}] \otimes \mathbb{Y}_{9}[\mathbb{Q}_{2,1}^{(b,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{6}[\mathbb{Q}_{2,2}^{(a,T_{2g})}] \otimes \mathbb{Y}_{10}[\mathbb{Q}_{2,2}^{(b,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{10}[\mathbb{Q}_{2,2}^{(a,T_{2g})}] \otimes \mathbb{Y}_{10}[\mathbb{Q}_{2,2}^{(a,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{10}[\mathbb{Q}_{2,2}^{(a,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{10}[\mathbb{Q}_{2,2}^{(a,T_{2g})}]}{5} + \frac{\sqrt{5}\mathbb{X}_{10}[\mathbb$$

No. 6 
$$\hat{\mathbb{Q}}_4^{(A_{1g})}$$
 [M<sub>1</sub>, B<sub>2</sub>]

$$\begin{split} \hat{\mathbb{Z}}_6 &= \frac{\sqrt{30} \mathbb{X}_2[\mathbb{Q}_{2,0}^{(a,E_g)}] \otimes \mathbb{Y}_6[\mathbb{Q}_{2,0}^{(b,E_g)}]}{10} + \frac{\sqrt{30} \mathbb{X}_3[\mathbb{Q}_{2,1}^{(a,E_g)}] \otimes \mathbb{Y}_7[\mathbb{Q}_{2,1}^{(b,E_g)}]}{10} - \frac{\sqrt{30} \mathbb{X}_4[\mathbb{Q}_{2,0}^{(a,T_{2g})}] \otimes \mathbb{Y}_8[\mathbb{Q}_{2,0}^{(b,T_{2g})}]}{15} \\ &- \frac{\sqrt{30} \mathbb{X}_5[\mathbb{Q}_{2,1}^{(a,T_{2g})}] \otimes \mathbb{Y}_9[\mathbb{Q}_{2,1}^{(b,T_{2g})}]}{15} - \frac{\sqrt{30} \mathbb{X}_6[\mathbb{Q}_{2,2}^{(a,T_{2g})}] \otimes \mathbb{Y}_{10}[\mathbb{Q}_{2,2}^{(b,T_{2g})}]}{15} \end{split}$$

Table 5: Atomic SAMB group.

group	bra	ket
$M_1$	$d_{yz}, d_{zx}, d_{xy}$	$d_{yz}, d_{zx}, d_{xy}$

Table 6: Atomic SAMB.

symbol	type	group	form
$\mathbb{X}_1$	$\mathbb{Q}_0^{(a,A_{1g})}$	$\mathrm{M}_1$	$ \begin{pmatrix} \frac{\sqrt{3}}{3} & 0 & 0 \\ 0 & \frac{\sqrt{3}}{3} & 0 \\ 0 & 0 & \frac{\sqrt{3}}{3} \end{pmatrix} $
$\mathbb{X}_2$	$\mathbb{Q}_{2,0}^{(a,E_g)}$	$\mathrm{M}_1$	$ \left( \begin{array}{ccc} \frac{\sqrt{6}}{6} & 0 & 0 \\ 0 & \frac{\sqrt{6}}{6} & 0 \\ 0 & 0 & -\frac{\sqrt{6}}{3} \end{array} \right) $
$\mathbb{X}_3$	$\mathbb{Q}_{2,1}^{(a,E_g)}$	$\mathrm{M}_1$	$ \begin{pmatrix} -\frac{\sqrt{2}}{2} & 0 & 0 \\ 0 & \frac{\sqrt{2}}{2} & 0 \\ 0 & 0 & 0 \end{pmatrix} $
$\mathbb{X}_4$	$\mathbb{Q}_{2,0}^{(a,T_{2g})}$	$ m M_1$	$ \begin{pmatrix} 0 & 0 & 0 \\ 0 & 0 & \frac{\sqrt{2}}{2} \\ 0 & \frac{\sqrt{2}}{2} & 0 \\ 0 & 0 & \frac{\sqrt{2}}{2} \end{pmatrix} $
$\mathbb{X}_5$	$\mathbb{Q}_{2,1}^{(a,T_{2g})}$	$ m M_1$	$\begin{pmatrix} 0 & 0 & 0 \\ \frac{\sqrt{2}}{2} & 0 & 0 \end{pmatrix}$
$\mathbb{X}_6$	$\mathbb{Q}_{2,2}^{(a,T_{2g})}$	$ m M_1$	$ \begin{pmatrix} 0 & \frac{\sqrt{2}}{2} & 0 \\ \frac{\sqrt{2}}{2} & 0 & 0 \\ 0 & 0 & 0 \end{pmatrix} $

Table 7: Cluster SAMB.

symbol	type	cluster	form
$\mathbb{Y}_1$	$\mathbb{Q}_0^{(s,A_{1g})}$	$S_1$	(1)
$\mathbb{Y}_2$	$\mathbb{Q}_0^{(b,A_{1g})}$	$\mathrm{B}_1$	$\begin{pmatrix} \frac{\sqrt{3}}{3} & \frac{\sqrt{3}}{3} & \frac{\sqrt{3}}{3} \end{pmatrix}$
$\mathbb{Y}_3$	$\mathbb{Q}_{2,0}^{(b,E_g)}$	$\mathrm{B}_1$	$\left(-\frac{\sqrt{6}}{3}  \frac{\sqrt{6}}{6}  \frac{\sqrt{6}}{6}\right)$
$\mathbb{Y}_4$	$\mathbb{Q}_{2,1}^{(b,E_g)}$	$\mathrm{B}_1$	$\left(0  -\frac{\sqrt{2}}{2}  \frac{\sqrt{2}}{2}\right)$
$\mathbb{Y}_5$	$\bigcap_{i}^{(b,A_{1g})}$	$\mathrm{B}_2$	$ \begin{pmatrix} \frac{\sqrt{6}}{6} & \frac{\sqrt{6}}{6} & \frac{\sqrt{6}}{6} & \frac{\sqrt{6}}{6} & \frac{\sqrt{6}}{6} \end{pmatrix} $
$\mathbb{Y}_6$	$\mathbb{Q}_{2,0}^{(b,E_g)}$	$\mathrm{B}_2$	$\left( -\frac{\sqrt{3}}{6} - \frac{\sqrt{3}}{6} - \frac{\sqrt{3}}{6} - \frac{\sqrt{3}}{3} - \frac{\sqrt{3}}{6} - \frac{\sqrt{3}}{3} \right)$
$\mathbb{Y}_7$	$\mathbb{Q}_{2,1}^{(b,E_g)}$	$\mathrm{B}_2$	$\begin{pmatrix} \frac{1}{2} & \frac{1}{2} & -\frac{1}{2} & 0 & -\frac{1}{2} & 0 \end{pmatrix}$
$\mathbb{Y}_8$	$\mathbb{Q}_{2,0}^{(b,T_{2g})}$	$\mathrm{B}_2$	$\begin{pmatrix} \frac{\sqrt{2}}{2} & -\frac{\sqrt{2}}{2} & 0 & 0 & 0 & 0 \end{pmatrix}$
$\mathbb{Y}_9$	$\bigcap^{(b,T_{2g})}$	$\mathrm{B}_2$	$\begin{pmatrix} 0 & 0 & -\frac{\sqrt{2}}{2} & 0 & \frac{\sqrt{2}}{2} & 0 \end{pmatrix}$
$\mathbb{Y}_{10}$	$\mathbb{Q}_{2,2}^{(b,T_{2g})}$	$B_2$	$\begin{pmatrix} 0 & 0 & 0 & -\frac{\sqrt{2}}{2} & 0 & \frac{\sqrt{2}}{2} \end{pmatrix}$

Table 8: Polar harmonics.

No.	symbol	rank	irrep.	mul.	comp.	form
1	$\mathbb{Q}_0^{(A_{1g})}$	0	$A_{1g}$	_	_	1
2	$\mathbb{Q}_{2,0}^{(E_g)}$	2	$E_g$	_	0	$-\frac{x^2}{2} - \frac{y^2}{2} + z^2$
3	$\mathbb{Q}_{2,1}^{(E_g)}$	2	$E_g$	_	1	$-\frac{2}{2} - \frac{2}{2} + 2$ $\frac{\sqrt{3}(x-y)(x+y)}{2}$
4	$\mathbb{Q}_{2,0}^{(T_{2g})}$	2	$T_{2g}$	_	0	$\sqrt{3}yz$
5	$\mathbb{Q}_{2,1}^{(T_{2g})}$	2	$T_{2g}$	_	1	$\sqrt{3}xz$
6	$\mathbb{Q}_{2,2}^{(T_{2g})}$	2	$T_{2g}$	_	2	$\sqrt{3}xy$

 $\bullet$  Group info.: Generator = {2001|0}, {2010|0}, {3^{+}\_{111}|0}, {2110|0}, {-1|0}

Table 9: Conjugacy class (point-group part).

rep. SO	symmetry operations
{1 0}	{1 0}
${\{2_{001} 0\}}$	$\{2_{001} 0\}, \{2_{100} 0\}, \{2_{010} 0\}$
${2110 0}$	$\{2_{110} 0\}, \{2_{101} 0\}, \{2_{011} 0\}, \{2_{1-10} 0\}, \{2_{1-10} 0\}, \{2_{01-1} 0\}$
${3^{+}_{111} 0}$	$\left  \  \{3^{+}_{111} 0\}, \ \{3^{+}_{1-1-1} 0\}, \ \{3^{+}_{-11-1} 0\}, \ \{3^{+}_{-1-11} 0\}, \ \{3^{-}_{111} 0\}, \ \{3^{-}_{-11-1} 0\}, \ \{3^{-}_{-11-1} 0\} \right.$
$\{4^{+}_{001} 0\}$	$\left  \begin{array}{cccccccccccccccccccccccccccccccccccc$
$\{-1 0\}$	$\{-1 0\}$
$\{m_{001} 0\}$	$\{m_{001} 0\}, \{m_{100} 0\}, \{m_{010} 0\}$
$\{m_{110} 0\}$	$\{m_{110} 0\}, \ \{m_{101} 0\}, \ \{m_{011} 0\}, \ \{m_{1-10} 0\}, \ \{m_{-101} 0\}, \ \{m_{01-1} 0\}$
$\{-3^{+}_{111} 0\}$	
$\{-4^{+}_{001} 0\}$	$\left\{ -4^{+}_{001} 0\}, \ \{-4^{+}_{100} 0\}, \ \{-4^{+}_{010} 0\}, \ \{-4^{-}_{001} 0\}, \ \{-4^{-}_{100} 0\}, \ \{-4^{-}_{010} 0\} \right\}$

Table 10: Symmetry operations.

No.	SO	No.	SO	No.	SO	No.	SO	No.	SO
 1	$\{1 0\}$	2	$\{2_{001} 0\}$	3	$\{2_{100} 0\}$	4	$\{2_{010} 0\}$	5	$\{2_{110} 0\}$
6	$\{2_{101} 0\}$	7	$\{2_{011} 0\}$	8	$\{2_{1-10} 0\}$	9	$\{2_{-101} 0\}$	10	$\{2_{01-1} 0\}$
11	$\{3^{+}_{111} 0\}$	12	$\{3^{+}_{1-1-1} 0\}$	13	$\{3^{+}_{-11-1} 0\}$	14	$\{3^{+}_{-1-11} 0\}$	15	$\{3^{-}_{111} 0\}$
16	$\{3^{-}_{1-1-1} 0\}$	17	${3^{-}_{-11-1} 0}$	18	${3^{-}_{-1-11} 0}$	19	$\{4^{+}_{001} 0\}$	20	$\{4^{+}_{100} 0\}$
21	$\{4^{+}_{010} 0\}$	22	$\{4^{-}_{001} 0\}$	23	$\{4^{-}_{100} 0\}$	24	$\{4^{-}_{010} 0\}$	25	$\{-1 0\}$
26	$\{m_{001} 0\}$	27	$\{m_{100} 0\}$	28	$\{m_{010} 0\}$	29	$\{m_{110} 0\}$	30	$\{m_{101} 0\}$
31	$\{m_{011} 0\}$	32	$\{m_{1-10} 0\}$	33	${m_{-101} 0}$	34	$\{m_{01-1} 0\}$	35	$\{-3^{+}_{111} 0\}$
36	$\{-3^+_{1-1-1} 0\}$	37	$\{-3^{+}_{-11-1} 0\}$	38	$\{-3^{+}_{-1-11} 0\}$	39	$\{-3^{-}_{111} 0\}$	40	$\{-3^{1-1-1} 0\}$
41	$\{-3^{-}_{-11-1} 0\}$	42	$\{-3^{-}_{-1-11} 0\}$	43	$\{-4^{+}_{001} 0\}$	44	$\{-4^{+}_{100} 0\}$	45	$\{-4^{+}_{010} 0\}$
46	$\{-4^{-}_{001} 0\}$	47	$\{-4^{-}_{100} 0\}$	48	$\{-4^{-}_{010} 0\}$				

Table 11: Character table (point-group part).

	1	2001	2110	3 <sup>+</sup> <sub>111</sub>	4 <sup>+</sup> <sub>001</sub>	-1	m <sub>001</sub>	m <sub>110</sub>	$-3^{+}_{111}$	$-4^{+}_{001}$
$\overline{A_{1g}}$	1	1	1	1	1	1	1	1	1	1
$A_{2g}$	1	1	-1	1	-1	1	1	-1	1	-1
$E_g$	2	2	0	-1	0	2	2	0	-1	0
$T_{1g}$	3	-1	-1	0	1	3	-1	-1	0	1
$T_{2g}$	3	-1	1	0	-1	3	-1	1	0	-1
$A_{1u}$	1	1	1	1	1	-1	-1	-1	-1	-1
$A_{2u}$	1	1	-1	1	-1	-1	-1	1	-1	1
$E_u$	2	2	0	-1	0	-2	-2	0	1	0
$T_{1u}$	3	-1	-1	0	1	-3	1	1	0	-1
$T_{2u}$	3	-1	1	0	-1	-3	1	-1	0	1

Table 12: Parity conversion.

$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$	$\leftrightarrow$
$A_{1g} (A_{1u})$	$A_{2g} (A_{2u})$	$E_g (E_u)$	$T_{1g} (T_{1u})$	$T_{2g} (T_{2u})$
$A_{1u} (A_{1g})$	$A_{2u} (A_{2g})$	$E_u (E_g)$	$T_{1u} (T_{1g})$	$T_{2u} (T_{2g})$

Table 13: Symmetric product,  $[\Gamma \otimes \Gamma']_+$ .

	$A_{1g}$	$A_{2g}$	$E_g$	$T_{1g}$	$T_{2g}$	$A_{1u}$	$A_{2u}$	$E_u$	$T_{1u}$	$T_{2u}$
$A_{1g}$	$A_{1g}$	$A_{2g}$	$E_g$	$T_{1g}$	$T_{2g}$	$A_{1u}$	$A_{2u}$	$E_u$	$T_{1u}$	$T_{2u}$
$A_{2g}$		$A_{1g}$	$E_g$	$T_{2g}$	$T_{1g}$	$A_{2u}$	$A_{1u}$	$E_u$	$T_{2u}$	$T_{1u}$
$E_g$			$A_{1g} + E_g$	$T_{1g} + T_{2g}$	$T_{1g} + T_{2g}$	$E_u$	$E_u$	$A_{1u} + A_{2u} + E_u$	$T_{1u} + T_{2u}$	$T_{1u} + T_{2u}$
$T_{1g}$				$A_{1g} + E_g + T_{2g}$	$A_{2g} + E_g + T_{1g} + T_{2g}$	$T_{1u}$	$T_{2u}$	$T_{1u} + T_{2u}$	$A_{1u} + E_u + T_{1u} + T_{2u}$	$A_{2u} + E_u + T_{1u} + T_{2u}$
$T_{2g}$					$A_{1g} + E_g + T_{2g}$	$T_{2u}$	$T_{1u}$	$T_{1u} + T_{2u}$	$A_{2u} + E_u + T_{1u} + T_{2u}$	$A_{1u} + E_u + T_{1u} + T_{2u}$
$A_{1u}$						$A_{1g}$	$A_{2g}$	$E_g$	$T_{1g}$	$T_{2g}$
$A_{2u}$							$A_{1g}$	$E_g$	$T_{2g}$	$T_{1g}$
$E_u$								$A_{1g} + E_g$	$T_{1g} + T_{2g}$	$T_{1g} + T_{2g}$
$T_{1u}$									$A_{1g} + E_g + T_{2g}$	$A_{2g} + E_g + T_{1g} + T_{2g}$
$T_{2u}$										$A_{1g} + E_g + T_{2g}$

Table 14: Anti-symmetric product,  $[\Gamma \otimes \Gamma]_{-}$ .

$A_{1g}$	$A_{2g}$	$E_g$	$T_{1g}$	$T_{2g}$	$A_{1u}$	$A_{2u}$	$E_u$	$T_{1u}$	$T_{2u}$
 _	_	$A_{2g}$	$T_{1g}$	$T_{1g}$	_	_	$A_{2g}$	$T_{1g}$	$T_{1g}$

Table 15: Virtual-cluster sites.

No.	position	No.	position	No.	position	No.	position
1	(3 2 1)	2	$\begin{pmatrix} -3 & -2 & 1 \end{pmatrix}$	3	(3 -2 -1)	4	$\begin{pmatrix} -3 & 2 & -1 \end{pmatrix}$
5	$\begin{pmatrix} 2 & 3 & -1 \end{pmatrix}$	6	$\begin{pmatrix} 1 & -2 & 3 \end{pmatrix}$	7	$\begin{pmatrix} -3 & 1 & 2 \end{pmatrix}$	8	$\begin{pmatrix} -2 & -3 & -1 \end{pmatrix}$
9	$\begin{pmatrix} -1 & -2 & -3 \end{pmatrix}$	10	$\begin{pmatrix} -3 & -1 & -2 \end{pmatrix}$	11	$\begin{pmatrix} 1 & 3 & 2 \end{pmatrix}$	12	$\begin{pmatrix} -1 & -3 & 2 \end{pmatrix}$
13	$\begin{pmatrix} 1 & -3 & -2 \end{pmatrix}$	14	$\begin{pmatrix} -1 & 3 & -2 \end{pmatrix}$	15	$\begin{pmatrix} 2 & 1 & 3 \end{pmatrix}$	16	$\begin{pmatrix} -2 & 1 & -3 \end{pmatrix}$
17	$\begin{pmatrix} -2 & -1 & 3 \end{pmatrix}$	18	$\begin{pmatrix} 2 & -1 & -3 \end{pmatrix}$	19	$\begin{pmatrix} -2 & 3 & 1 \end{pmatrix}$	20	$\begin{pmatrix} 3 & -1 & 2 \end{pmatrix}$
21	$\begin{pmatrix} 1 & 2 & -3 \end{pmatrix}$	22	$\begin{pmatrix} 2 & -3 & 1 \end{pmatrix}$	23	$\begin{pmatrix} 3 & 1 & -2 \end{pmatrix}$	24	$\begin{pmatrix} -1 & 2 & 3 \end{pmatrix}$
25	$\begin{pmatrix} -3 & -2 & -1 \end{pmatrix}$	26	$\begin{pmatrix} 3 & 2 & -1 \end{pmatrix}$	27	$\begin{pmatrix} -3 & 2 & 1 \end{pmatrix}$	28	$\begin{pmatrix} 3 & -2 & 1 \end{pmatrix}$
29	$\begin{pmatrix} -2 & -3 & 1 \end{pmatrix}$	30	$\begin{pmatrix} -1 & 2 & -3 \end{pmatrix}$	31	$\begin{pmatrix} 3 & -1 & -2 \end{pmatrix}$	32	$\begin{pmatrix} 2 & 3 & 1 \end{pmatrix}$
33	$\begin{pmatrix} 1 & 2 & 3 \end{pmatrix}$	34	$\begin{pmatrix} 3 & 1 & 2 \end{pmatrix}$	35	$\begin{pmatrix} -1 & -3 & -2 \end{pmatrix}$	36	$\begin{pmatrix} 1 & 3 & -2 \end{pmatrix}$
37	$\begin{pmatrix} -1 & 3 & 2 \end{pmatrix}$	38	$\begin{pmatrix} 1 & -3 & 2 \end{pmatrix}$	39	$\begin{pmatrix} -2 & -1 & -3 \end{pmatrix}$	40	$\begin{pmatrix} 2 & -1 & 3 \end{pmatrix}$
41	$\begin{pmatrix} 2 & 1 & -3 \end{pmatrix}$	42	$\begin{pmatrix} -2 & 1 & 3 \end{pmatrix}$	43	$\begin{pmatrix} 2 & -3 & -1 \end{pmatrix}$	44	$\begin{pmatrix} -3 & 1 & -2 \end{pmatrix}$
45	$\begin{pmatrix} -1 & -2 & 3 \end{pmatrix}$	46	$\begin{pmatrix} -2 & 3 & -1 \end{pmatrix}$	47	$\begin{pmatrix} -3 & -1 & 2 \end{pmatrix}$	48	$\begin{pmatrix} 1 & -2 & -3 \end{pmatrix}$

Table 16: Virtual-cluster basis.

symbol	1	2	3	4	5	6	7	8	9	10
$\mathbb{Q}_0^{(A_{1g})}$	$\frac{\sqrt{3}}{12}$									

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$								
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$								
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$								
	$\frac{\sqrt{3}}{12}$									
$\mathbb{Q}_{1,0}^{(T_{1u})}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$
	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$
	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$		
$\mathbb{Q}_{1,1}^{(T_{1u})}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$
	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\tfrac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$		
$\mathbb{Q}_{1,2}^{(T_{1u})}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$
	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$
	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$		
$\mathbb{Q}_{2,0}^{(E_g)}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$		
$\mathbb{Q}_{2,1}^{(E_g)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$
	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$
	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$		
$\mathbb{Q}_{2,0}^{(T_{2g})}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$

Table 16

Table 16					<u>.</u>					
symbol	1	2	3	4	5	6	7	8	9	10
	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$
	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	3 14	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$
	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{3}{28}$
(T. )	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$		
$\mathbb{Q}_{2,1}^{(T_{2g})}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{28}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$
	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$\frac{3}{14}$
	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{28}$
	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$
	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$		
$\mathbb{Q}_{2,2}^{(T_{2g})}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$
	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$
	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{1}{14}$
	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{1}{14}$
	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$		
$\mathbb{Q}_3^{(A_{2u})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{3,0}^{(T_{1u})}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
-,-	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{3,1}^{(T_{1u})}$	$-\frac{\sqrt{3}}{12}$ $\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
~,*	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	12	12
$\mathbb{Q}_{3,2}^{(T_{1u})}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
<b>~</b> 3,2	12	12	12	12	12	12	12	12	12	12

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{3,0}^{(T_{2u})}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$
	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$		
$\mathbb{Q}_{3,1}^{(T_{2u})}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$
	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$
	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$		
$\mathbb{Q}_{3,2}^{(T_{2u})}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$		
$\mathbb{Q}_{4,0}^{(E_g)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$
,-	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$
	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$
	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$
	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$		
$\mathbb{Q}_{4,1}^{(E_g)}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
,	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$
	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$		
$\mathbb{Q}_{4,0}^{(T_{1g})}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$
	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$
	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$		
$\mathbb{Q}_{4,1}^{(T_{1g})}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$
	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$		
$\mathbb{Q}_{4,2}^{(T_{1g})}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$
	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$		
$\mathbb{Q}_{4,0}^{(T_{2g})}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$
	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$
	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$		
$\mathbb{Q}_{4,1}^{(T_{2g})}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$
	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$
	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$
	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$
	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$		
$\mathbb{Q}_{4,2}^{(T_{2g})}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$
	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\tfrac{111\sqrt{362}}{10136}$
	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$		
$\mathbb{Q}_{5,0}^{(E_u)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
53 111501	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$
	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$
	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	56	50
$\mathbb{Q}_{5,1}^{(E_u)}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
-,	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$
	$\frac{\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$
	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$		
$\mathbb{Q}_{5,0}^{(T_{1u},1)}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$
	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$
	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$		
$\mathbb{Q}_{5,1}^{(T_{1u},1)}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-rac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$
	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$
	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$
	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$		
$\mathbb{Q}_{5,2}^{(T_{1u},1)}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$
	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$
	$-\frac{\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{168}$
	$\frac{\sqrt{42}}{42}$	$\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$
	$-\frac{\sqrt{42}}{168}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$\frac{\sqrt{42}}{42}$	$\frac{\sqrt{42}}{168}$	$-\frac{5\sqrt{42}}{168}$	$-\frac{\sqrt{42}}{42}$	$-\frac{\sqrt{42}}{168}$		
$\mathbb{Q}_{5,0}^{(T_{2u})}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$
	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$
	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$
(T. )	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$		
$\mathbb{Q}_{5,1}^{(T_{2u})}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$
	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$
	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$
	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\tfrac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$		
$\mathbb{Q}_{5,2}^{(T_{2u})}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$
	$\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{59\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$\frac{11\sqrt{362}}{2534}$	$\frac{59\sqrt{362}}{10136}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$
	$-\frac{111\sqrt{362}}{10136}$	$\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$\frac{11\sqrt{362}}{2534}$	$-\frac{111\sqrt{362}}{10136}$	$-\frac{59\sqrt{362}}{10136}$	$-\frac{11\sqrt{362}}{2534}$	$\frac{111\sqrt{362}}{10136}$		
$\mathbb{Q}_{6}^{(A_{2g})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{6,0}^{(T_{1g})}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
(m. )	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{6,1}^{(T_{1g})}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
(77. )	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{6,2}^{(T_{1g})}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$		
$\mathbb{Q}_{6,0}^{(T_{2g},1)}$	$\frac{12}{-9\sqrt{362}}$	$\frac{12}{9\sqrt{362}}$ $\frac{1448}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$2\sqrt{362}$	$\frac{5\sqrt{362}}{1448}$	$9\sqrt{362}$	$\frac{12}{2\sqrt{362}}$	$-5\sqrt{362}$	$-9\sqrt{362}$

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	101	101
$\mathbb{Q}_{6,1}^{(T_{2g},1)}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$
	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$		
$\mathbb{Q}_{6,2}^{(T_{2g},1)}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$
	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{5\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{2\sqrt{362}}{181}$	$-\frac{5\sqrt{362}}{1448}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$
	$-\frac{9\sqrt{362}}{1448}$	$\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$-\frac{2\sqrt{362}}{181}$	$-\frac{9\sqrt{362}}{1448}$	$\frac{5\sqrt{362}}{1448}$	$\frac{2\sqrt{362}}{181}$	$\frac{9\sqrt{362}}{1448}$		
$\mathbb{Q}_{7,0}^{(E_u)}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$-\frac{11\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$
	$\frac{13\sqrt{6}}{168}$	$-\frac{11\sqrt{6}}{168}$	$-\frac{\sqrt{6}}{84}$	$\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$
	$\frac{\sqrt{6}}{84}$	$\frac{11\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$
	$-\frac{13\sqrt{6}}{168}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$	$\frac{11\sqrt{6}}{168}$	$\frac{\sqrt{6}}{84}$	$-\frac{13\sqrt{6}}{168}$		
$\mathbb{Q}_{7,1}^{(E_u)}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$-\frac{5\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$
	$-\frac{\sqrt{2}}{7}$	$\frac{5\sqrt{2}}{56}$	$\frac{3\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$\frac{\sqrt{2}}{7}$	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$
	$-\frac{3\sqrt{2}}{56}$	$-\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$	$\frac{5\sqrt{2}}{56}$	$-\frac{\sqrt{2}}{7}$	$\frac{3\sqrt{2}}{56}$		
$\mathbb{Q}_{7,0}^{(T_{2u},1)}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$	$-\frac{1}{14}$
	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$
	$\frac{3}{14}$	$\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$
	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{3}{28}$
	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$		
$\mathbb{Q}_{7,1}^{(T_{2u},1)}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{28}$	$\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$	$-\frac{3}{14}$

Table 16

symbol	1	2	3	4	5	6	7	8	9	10
	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{3}{14}$
	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{3}{28}$
	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$
-	$-\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$		
$\mathbb{Q}_{7,2}^{(T_{2u},1)}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$-\frac{3}{14}$	$-\frac{1}{14}$	$-\frac{3}{28}$
	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{1}{14}$	$\frac{1}{14}$	$-\frac{1}{14}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{28}$
	$-\frac{1}{14}$	$\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$\frac{3}{14}$	$\frac{3}{14}$	$-\frac{3}{14}$	$-\frac{3}{14}$	$\frac{3}{14}$	$-\frac{1}{14}$
	$-\frac{3}{28}$	$\frac{3}{14}$	$\frac{1}{14}$	$\frac{3}{28}$	$\frac{3}{28}$	$\frac{3}{28}$	$-\frac{3}{28}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{1}{14}$
(77. 1)	$\frac{1}{14}$	$-\frac{1}{14}$	$-\frac{3}{14}$	$-\frac{3}{28}$	$\frac{1}{14}$	$-\frac{3}{14}$	$\frac{3}{28}$	$-\frac{1}{14}$		
$\mathbb{Q}_{8,0}^{(T_{1g},1)}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$ \begin{array}{r} 14 \\ -\frac{\sqrt{14}}{56} \\ \hline \end{array} $	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{56}$ $\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$ $\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$ $\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$
	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-rac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$
	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$		
$\mathbb{Q}_{8,1}^{(T_{1g},1)}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$
	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-rac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$
(T. 1)	$   \begin{array}{r}                                     $	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$		
$\mathbb{Q}_{8,2}^{(T_{1g},1)}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$
	$-\frac{\sqrt{14}}{28}$ $\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$
	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$\frac{\sqrt{14}}{56}$	$-\frac{3\sqrt{14}}{56}$
	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$	$\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$-\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$	$\frac{3\sqrt{14}}{56}$
	$-\frac{3\sqrt{14}}{56}$ $\frac{\sqrt{3}}{12}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{28}$	$\frac{3\sqrt{14}}{56}$	$-\frac{\sqrt{14}}{56}$ $\frac{\sqrt{3}}{12}$	$\frac{\sqrt{14}}{28}$	$-\frac{3\sqrt{14}}{56}$		
$\mathbb{Q}_9^{(A_{1u})}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$
	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$
	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$	$-\frac{\sqrt{3}}{12}$		