A COMPLETE LIST OF g-VECTORS FOR $\mathcal{D}_3$

We recall that $\mathcal{D}_3 = \mathbb{F}Q/I$ is given by

$$Q:\ 1 \underset{\beta_1}{\overset{\alpha_1}{\rightleftarrows}} 3 \underset{\alpha_2}{\overset{\beta_2}{\rightleftarrows}} 2$$

with

$$I : \left\langle \alpha_2\beta_2, \alpha_1\beta_1, \beta_1\alpha_1, \alpha_2\beta_1\alpha_1, \beta_1\alpha_1\beta_2 \right\rangle .$$

Then, the complete list of g-vectors for $\mathcal{D}_3$ is as follows.

(1) $\begin{pmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

(2) $\begin{pmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{pmatrix}$

(3) $\begin{pmatrix} 1 & 1 & -1 \\ 1 & 0 & 0 \\ 0 & 1 & 0 \end{pmatrix}$

(4) $\begin{pmatrix} 0 & -1 & 1 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

(5) $\begin{pmatrix} -1 & 0 & 1 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{pmatrix}$

(6) $\begin{pmatrix} 2 & 0 & -1 \\ 1 & 1 & -1 \\ 1 & 0 & 0 \end{pmatrix}$

(7) $\begin{pmatrix} 1 & 1 & -1 \\ 0 & 1 & 0 \\ 0 & 1 & -1 \end{pmatrix}$

(8) $$\begin{pmatrix} 1 & -1 & 0 \\ 0 & -1 & 1 \\ 1 & 0 & 0 \end{pmatrix}$$

(9) $$\begin{pmatrix} -1 & 0 & 1 \\ 0 & -1 & 1 \\ 0 & 0 & 1 \end{pmatrix}$$

(10) $$\begin{pmatrix} -1 & 1 & 0 \\ -1 & 0 & 1 \\ 0 & 1 & 0 \end{pmatrix}$$

(11) $$\begin{pmatrix} 2 & 0 & -1 \\ 1 & 1 & -1 \\ 1 & 0 & -1 \end{pmatrix}$$

(12) $$\begin{pmatrix} 1 & -1 & 0 \\ 2 & 0 & -1 \\ 1 & 0 & 0 \end{pmatrix}$$

(13) $$\begin{pmatrix} 1 & 1 & -1 \\ 0 & 1 & -1 \\ 1 & 0 & -1 \end{pmatrix}$$

(14) $$\begin{pmatrix} -1 & 1 & 0 \\ 0 & 1 & 0 \\ 0 & 1 & -1 \end{pmatrix}$$

(15) $$\begin{pmatrix} 0 & -1 & 1 \\ 1 & -1 & 0 \\ 0 & -1 & 0 \end{pmatrix}$$

(16) $$\begin{pmatrix} -1 & -1 & 1 \\ -1 & 0 & 1 \\ 0 & -1 & 1 \end{pmatrix}$$

(17) $$\begin{pmatrix} -2 & 0 & 1 \\ -1 & 1 & 0 \\ -1 & 0 & 1 \end{pmatrix}$$

$$\textbf{(18)}\quad \begin{pmatrix} 1 & -1 & 0 \\ 2 & 0 & -1 \\ 1 & 0 & -1 \end{pmatrix}$$

$$\textbf{(19)}\quad \begin{pmatrix} 0 & 1 & -1 \\ 1 & 0 & -1 \\ 0 & 0 & -1 \end{pmatrix}$$

$$\textbf{(20)}\quad \begin{pmatrix} -1 & 1 & 0 \\ 0 & 1 & -1 \\ -1 & 0 & 0 \end{pmatrix}$$

$$\textbf{(21)}\quad \begin{pmatrix} -1 & -1 & 1 \\ 0 & -1 & 1 \\ 0 & -1 & 0 \end{pmatrix}$$

$$\textbf{(22)}\quad \begin{pmatrix} 1 & -1 & 0 \\ 1 & 0 & -1 \\ 0 & -1 & 0 \end{pmatrix}$$

$$\textbf{(23)}\quad \begin{pmatrix} -2 & 0 & 1 \\ -1 & -1 & 1 \\ -1 & 0 & 1 \end{pmatrix}$$

$$\textbf{(24)}\quad \begin{pmatrix} -1 & 1 & 0 \\ -2 & 0 & 1 \\ -1 & 0 & 0 \end{pmatrix}$$

$$\textbf{(25)}\quad \begin{pmatrix} 1 & 0 & -1 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{pmatrix}$$

$$\textbf{(26)}\quad \begin{pmatrix} 0 & 1 & -1 \\ -1 & 0 & 0 \\ 0 & 0 & -1 \end{pmatrix}$$

$$\textbf{(27)}\quad \begin{pmatrix} -1 & -1 & 1 \\ -1 & 0 & 0 \\ 0 & -1 & 0 \end{pmatrix}$$

(28) $$\begin{pmatrix} -1 & -1 & 1 \\ -2 & 0 & 1 \\ -1 & 0 & 0 \end{pmatrix}$$