Rep of mapping class group

$$\begin{pmatrix} a & \sqrt{a(1-a)} \\ \sqrt{a(1-a)} & 1-a \end{pmatrix}$$

$$e_1 = \begin{pmatrix} 1 & 0 & & & \\ 0 & 0 & & & \\ & & 1 & & \\ & & & 0 & \\ & & & & 0 \end{pmatrix} \qquad e_2 = \begin{pmatrix} \tau & \sqrt{}_1 & & & \\ \sqrt{}_1 & 1-\tau & & & \\ & & \tau & \sqrt{}_1 & \\ & & \sqrt{}_1 & 1-\tau & \\ & & & & 0 \end{pmatrix}$$

$$e_3 = \begin{pmatrix} 1 & 0 & & & \\ 0 & 0 & & & \\ & & 0 & 0 & 0 \\ & & 0 & \frac{\tau}{1-\tau} & \sqrt{}_2 \\ & & 0 & \sqrt{}_2 & \frac{1-2\tau}{1-\tau} \end{pmatrix} \qquad e_4 = \begin{pmatrix} \tau & 0 & \sqrt{}_1 & 0 & 0 \\ 0 & \tau & 0 & \sqrt{}_1 & 0 \\ \sqrt{}_1 & 0 & 1-\tau & 0 & 0 \\ 0 & \sqrt{}_1 & 0 & 1-\tau & 0 \\ 0 & 0 & 0 & 0 & 0 \end{pmatrix}$$

$$e_5 = \begin{pmatrix} 1 & 0 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 & 0 \\ 0 & 0 & 0 & 0 & 0 \\ & & & 0 & 0 \\ 0 & 0 & 0 & 0 & \end{pmatrix}$$

$\frac{\tau}{1-\tau} = \frac{t}{1+t+t^2}$

$\frac{1-2\tau}{1-\tau} = \frac{1+t^2}{(1+t+t^2)}$

$e_1 e_2 e_1 = \tau e_1$ ✓

$e_3 e_4 e_3 = \tau e_3$ ✓

$e_5 e_4 e_5 = \tau e_5$ ✓

$e_1 e_3 = 0$

$e_1 e_4 = 0$

$e_2 e_5$ [illegible]

$1-2\tau = \frac{1+t^2}{(1+t)^2}$

$1-\tau = \frac{1+t+t^2}{(1+t)^2}$

$e_5 g_4 = 0$ [illegible]

$$g_1 = \begin{pmatrix} t & 0 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 & 0 \\ 0 & 0 & t & 0 & 0 \\ 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 0 & -1 \end{pmatrix} \qquad g_2 = \frac{1}{(1+t)} \begin{pmatrix} -1 & \alpha & 0 & 0 & 0 \\ \alpha & t^2 & 0 & 0 & 0 \\ 0 & 0 & -1 & \alpha & 0 \\ 0 & 0 & \alpha & t^2 & 0 \\ 0 & 0 & 0 & 0 & -(1+t) \end{pmatrix}$$

$\alpha = \sqrt{t(1+t+t^2)}$

$\beta = \sqrt{t(1+t^2)}$

$$g_3 = \begin{pmatrix} t & 0 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 & 0 \\ 0 & 0 & -1 & & \\ 0 & 0 & 0 & \frac{-1}{1+t+t^2} & \frac{(t+1)\beta}{1+t+t^2} \\ 0 & 0 & 0 & \frac{(t+1)\beta}{1+t+t^2} & \frac{t^3}{1+t+t^2} \end{pmatrix} \qquad g_4 = -\frac{1}{1+t} \begin{pmatrix} -1 & 0 & \alpha & 0 & 0 \\ 0 & -1 & 0 & \alpha & 0 \\ \alpha & 0 & t^2 & 0 & 0 \\ 0 & \alpha & 0 & t^2 & 0 \\ 0 & 0 & 0 & 0 & -(1+t) \end{pmatrix}$$

$$g_5 = \begin{pmatrix} t & 0 & 0 & 0 & 0 \\ 0 & t & 0 & 0 & 0 \\ 0 & 0 & -1 & 0 & 0 \\ 0 & 0 & 0 & -1 & 0 \\ 0 & 0 & 0 & 0 & -1 \end{pmatrix}$$

so $g_5 \rightleftarrows g_1, g_2, g_3$ [illegible]

all multiplied by $\left(-t^{-\frac{2}{5}}\right)$