

$$\mathbf{a} = (\textcolor{brown}{\bullet} , \textcolor{brown}{\bullet} , \textcolor{darkred}{\bullet})$$

$$\mathbf{b} = (\mathfrak{V}, \mathfrak{h}, \mathfrak{z}, \mathfrak{Y})$$

$$\begin{aligned} \mathbf{a} \otimes \mathbf{b} = & ((\textcolor{brown}{\bullet}, \mathfrak{V}), (\textcolor{brown}{\bullet}, \mathfrak{h}), (\textcolor{brown}{\bullet}, \mathfrak{z}), (\textcolor{brown}{\bullet}, \mathfrak{Y}), \\ & (\textcolor{brown}{\bullet}, \mathfrak{V}), (\textcolor{brown}{\bullet}, \mathfrak{h}), (\textcolor{brown}{\bullet}, \mathfrak{z}), (\textcolor{brown}{\bullet}, \mathfrak{Y}), \\ & (\textcolor{darkred}{\bullet}, \mathfrak{V}), (\textcolor{darkred}{\bullet}, \mathfrak{h}), (\textcolor{darkred}{\bullet}, \mathfrak{z}), (\textcolor{darkred}{\bullet}, \mathfrak{Y})) \end{aligned}$$

$$= \begin{pmatrix} \textcolor{brown}{\mathfrak{V}} & \textcolor{brown}{\mathfrak{h}} & \textcolor{brown}{\mathfrak{z}} & \textcolor{brown}{\mathfrak{Y}} \\ \textcolor{brown}{\mathfrak{V}} & \textcolor{brown}{\mathfrak{h}} & \textcolor{brown}{\mathfrak{z}} & \textcolor{brown}{\mathfrak{Y}} \\ \textcolor{brown}{\mathfrak{V}} & \textcolor{brown}{\mathfrak{h}} & \textcolor{brown}{\mathfrak{z}} & \textcolor{brown}{\mathfrak{Y}} \end{pmatrix}$$