$$\mathbf{a} = (\,\bullet\,,\,\bullet\,,\,\bullet\,)$$

$$\mathbf{b} = (\,\mathrm{♅},\mathrm{♄},\mathrm{♃},\mathrm{☿}\,)$$

$$\begin{aligned}\mathbf{a} \otimes \mathbf{b} = ((\,\bullet\,,\mathrm{♅}),(\,\bullet\,,\mathrm{♄}),(\,\bullet\,,\mathrm{♃}),(\,\bullet\,,\mathrm{☿}),\\ (\,\bullet\,,\mathrm{♅}),(\,\bullet\,,\mathrm{♄}),(\,\bullet\,,\mathrm{♃}),(\,\bullet\,,\mathrm{☿}),\\ (\,\bullet\,,\mathrm{♅}),(\,\bullet\,,\mathrm{♄}),(\,\bullet\,,\mathrm{♃}),(\,\bullet\,,\mathrm{☿}))\end{aligned}$$

$$= \begin{pmatrix} \mathrm{♅} & \mathrm{♄} & \mathrm{♃} & \mathrm{☿} \\ \mathrm{♅} & \mathrm{♄} & \mathrm{♃} & \mathrm{☿} \\ \mathrm{♅} & \mathrm{♄} & \mathrm{♃} & \mathrm{☿} \end{pmatrix}$$