[13.13] In $\mathbb{R}^3$, $x^a \rightarrow T_b^a x^b = T_1^a x^1 + T_2^a x^2 + T_3^a x^3$, or

$$\begin{cases} x^1 \rightarrow T_1^1 x^1 + T_2^1 x^2 + T_3^1 x^3 \\ x^1 \rightarrow T_1^2 x^1 + T_2^2 x^2 + T_3^2 x^3 & \text{is the explicit representation.} \\ x^1 \rightarrow T_1^3 x^1 + T_2^3 x^2 + T_3^3 x^3 \end{cases}$$

✔