

$$\underline{S \circ T(N) = S(T(N))}$$

$$\rightarrow T(x, y, z) = (2x+y, x-y+z)$$

$$A = \{(1, 0), (1, 1)\}$$

$$B = \{(1, 0, 1), (0, 1, 0), (1, 0, -1)\}$$

$$B(S)_A = \begin{pmatrix} 2 & 1 \\ 1 & 0 \\ 1 & 1 \end{pmatrix}$$

$$S: \mathbb{R}^2 \rightarrow \mathbb{R}^3$$

$$S \circ T(N) = S(T(N))$$

$$S(2x+y, x-y+z) = (3(2x+y) - (x-y+z), 2x+y - (x-y+z), 2x+y - (x-y+z))$$

$$(5x+4y-z, x+2y-z, x+2y-z) \Rightarrow \text{OPCIÓN A}$$

$$\boxed{B(S)_A \cdot \text{COORD}_A N = \text{COORD}_B T(N)}$$

$$(x, y) = \alpha (1, 0) + \beta (1, 1)$$

$$x = \alpha + \beta \rightarrow \alpha = x - \beta$$

$$y = \beta$$

$$N = (x, y) \rightarrow \text{COORD}_A N = (\alpha, \beta) = (x-y, y)$$

$$\begin{pmatrix} 2 & 1 \\ 1 & 0 \\ 1 & 1 \end{pmatrix} \begin{pmatrix} 2x-y \\ x-y \\ x \end{pmatrix} = \text{COORD}_B^T S(x, y)$$

$$S(x, y) = (2x-y)(1, 0, 1) + (x-y)(0, 1, 0) + x(1, 0, -1)$$

$$= (2x-y+x, x-y, 2x-y-x)$$

$$\rightarrow S(x, y) = (3x-y, x-y, x-y)$$

$$B \xrightarrow{b} V$$

$$(N \in V)$$