Source:

1 | product of vector spaces def

Suppose $V_1, \ldots, V_m$ are vector spaces over $\mathbb{F}$

- The *product* $V_1 \times \cdots \times V_m = \{(v_1, \ldots, v_m) : v_1 \in V_1, \ldots, v_m \in V_m\}$

1.1 | careful

1.1.1 | product of multiple vector spaces (not just two)

1. similar to how sums/direct sums are not just sums of a pair but rather sums of a list