

Definition: n -Tuple

An n -tuple is an ordered list of n elements written as:

$$(x_1, x_2, \dots, x_{n-1}, x_n) \stackrel{\text{def}}{=} \{\{x_1\}, \{x_1, x_2\}, \{x_1, x_2, x_3\}, \dots, \{x_1, x_2, \dots, x_n\}\}$$

We say that two n -tuples, a, b are equal when we have $\forall i \in [n]$ that $a_i = b_i$ (And say that a_i is the i -th coordinate of a)