Definition: n-Tuple

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

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

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)