Experiment 1: lists of numbers

- List X is the set of tuples of the form

  $\langle x_1, \langle x_2, \ldots, \langle x_n, \mathsf{True}\rangle \ldots\rangle\rangle$

  where $x_i \in$ X, i.e.

$$
\begin{aligned}
\mathsf{List\ X} = \;& \{\mathsf{True}\} \cup \\
& (\mathtt{X}\times\{\mathsf{True}\}) \cup \\
& (\mathtt{X}\times(\mathtt{X}\times\{\mathsf{True}\})) \cup \\
& \quad\vdots
\end{aligned}
$$

- Not a type theory style construction!
- List Num is the set of lists of numbers