Defining a HOL Type with List

- HOL types are defined via subtypes of existing types
  - the subtype is specified by a predicate
- Predicate λ`x. x` $\in$ List Num specifies subtype of V consisting of lists of numbers
- Define *numlist* isomorphic to this subtype
- Result is:

  List2numlist : $V \rightarrow$ *numlist*

  numlist2List : *numlist* $\rightarrow V$

  `where:`

  $\forall$a. List2numlist(numlist2List a) = a

  $\forall$r. r $\in$ (List Num) =
  (numlist2List(List2numlist r) = r)