The combinator as

as :: Encoder
$$a \rightarrow \text{Encoder } b \rightarrow b \rightarrow a$$
 as that this = to (with that this) a2b x = as A B x b2a x = as B A x
$$\underbrace{a2b = as \ B \ A}_{b2a = as \ A \ B} B$$
 b2a = as A B $\underbrace{a^{-1}}_{b-1}$ Root

as [Nat] has been chosen as the root, we will define our finite function data type **fun** simply as the identity isomorphism on sequences in [Nat]:

fun :: Encoder [Nat]
fun = itself