# t101_finseq_3 (TMTAryQcwqAztmETqYFFcvk9jBTdptzwtjs)

October 27, 2020

Let $v1\_relat\_1 : \iota \Rightarrow o$ be given. Let $v1\_funct\_1 : \iota \Rightarrow o$ be given. Let $v1\_finseq\_1 : \iota \Rightarrow o$ be given. Let $v2\_funct\_1 : \iota \Rightarrow o$ be given. Let $k10\_xtuple\_0 : \iota \Rightarrow \iota$ be given. Let $k1\_enumset1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $np\_\_3 : \iota$ be given. Let $k11\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow \iota$ be given. Assume the following.

$$\forall X0.\forall X1.\forall X2.((X0 \neq X1) \wedge ((X1 \neq X2) \wedge (X2 \neq X0))) \Leftrightarrow (v2\_funct\_1\ (k11\_finseq\_1\ X0\ X1\ X2)) \tag{1}$$

Assume the following.

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.\forall X2.\forall X3.((v2\_funct\_1\ X0) \wedge ((k10\_xtuple\_0\ X0 = k1\_enumset1\ X1\ X2\ X3) \wedge (v2\_funct\_1\ (k11\_finseq\_1\ X1\ X2\ X3)))) \Rightarrow (k3\_finseq\_1\ X0 = np\_\_3)) \tag{2}$$

**Theorem 1**

$$\forall X0.((v1\_relat\_1\ X0) \wedge ((v1\_funct\_1\ X0) \wedge (v1\_finseq\_1\ X0))) \Rightarrow (\forall X1.\forall X2.\forall X3.((v2\_funct\_1\ X0) \wedge (k10\_xtuple\_0\ X0 = k1\_enumset1\ X1\ X2\ X3)) \Rightarrow ((X1 = X2) \vee ((X2 = X3) \vee ((X1 = X3) \vee (k3\_finseq\_1\ X0 = np\_\_3)))))$$