l175_seq_4 (TMTG6UsjeZvemD8sDhpLEbDN98xWPJjTcDk)

October 27, 2020

Let $m2\_subset\_1 : \iota \Rightarrow \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k1\_numbers : \iota$ be given. Let $k5\_numbers : \iota$ be given. Let $m2\_finseq\_1 : \iota \Rightarrow \iota \Rightarrow o$ be given. Let $k3\_finseq\_1 : \iota \Rightarrow \iota$ be given. Let $k1\_rvsum\_1 : \iota \Rightarrow \iota$ be given. Let $v5\_valued\_0 : \iota \Rightarrow o$ be given. Let $k6\_numbers : \iota$ be given. Let $k2\_nat\_1 : \iota \Rightarrow \iota \Rightarrow \iota$ be given. Let $np\_\_1 : \iota$ be given. Assume the following.

$$\forall X0 : \iota \Rightarrow o.((X0\ k6\_numbers) \wedge (\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers) \Rightarrow ((X0\ X1) \Rightarrow (X0\ (k2\_nat\_1\ X1\ np\_\_1))))) \Rightarrow (\forall X1.(m2\_subset\_1\ X1\ k1\_numbers\ k5\_numbers) \Rightarrow (X0\ X1)) \tag{1}$$

Assume the following.

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow ((\forall X1.(m2\_finseq\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k1\_numbers) \Rightarrow (((k3\_finseq\_1\ X1 = X0) \wedge ((k3\_finseq\_1\ X2 = X0) \wedge ((k1\_rvsum\_1\ X1 = k1\_rvsum\_1\ X2) \wedge ((v5\_valued\_0\ X1) \wedge (v5\_valued\_0\ X2))))) \Rightarrow (X1 = X2)))) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k1\_numbers) \Rightarrow (((k3\_finseq\_1\ X1 = k2\_nat\_1\ X0\ np\_\_1) \wedge ((k3\_finseq\_1\ X2 = k2\_nat\_1\ X0\ np\_\_1) \wedge ((k1\_rvsum\_1\ X1 = k1\_rvsum\_1\ X2) \wedge ((v5\_valued\_0\ X1) \wedge (v5\_valued\_0\ X2))))) \Rightarrow (X1 = X2)))))) \tag{2}$$

Assume the following.

$$\forall X0.(m2\_finseq\_1\ X0\ k1\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ k1\_numbers) \Rightarrow (((k3\_finseq\_1\ X0 = k6\_numbers) \wedge ((k3\_finseq\_1\ X1 = k6\_numbers) \wedge ((k1\_rvsum\_1\ X0 = k1\_rvsum\_1\ X1) \wedge ((v5\_valued\_0\ X0) \wedge (v5\_valued\_0\ X1))))) \Rightarrow (X0 = X1))) \tag{3}$$

Theorem 1

$$\forall X0.(m2\_subset\_1\ X0\ k1\_numbers\ k5\_numbers) \Rightarrow (\forall X1.(m2\_finseq\_1\ X1\ k1\_numbers) \Rightarrow (\forall X2.(m2\_finseq\_1\ X2\ k1\_numbers) \Rightarrow (((k3\_finseq\_1\ X1 = X0) \wedge ((k3\_finseq\_1\ X2 = X0) \wedge ((k1\_rvsum\_1\ X1 = k1\_rvsum\_1\ X2) \wedge ((v5\_valued\_0\ X1) \wedge (v5\_valued\_0\ X2))))) \Rightarrow (X1 = X2))))$$